

KAMSSA 2022 ICT 1 MARKING GUIDE

1. (a). Define the term data. (01 mark)
- *Data refers to a collection of raw / meaningless / un processed / un summarised facts entered into a computer.*
- Any one correct item, 01 mark*
- (b). State the difference between hardware and software. (02 marks)
- *Hardware refers to the tangible / physical / touchable parts of a computer,*
- while;*
- *Software refers to a collection of scientific coded instructions that help a computer to work.*
- The two statements should be correct for the award of the two 02 marks*
- (c). Mention two devices that can be used to convert softcopy to hardcopy information(02 marks)
- *Printer*
 - *Plotter*
 - *Microfiche*
2. (a). Give the distinction between a footnote and an endnote as used in a document. (02 marks)
- *A footnote can be described as a note shown at the bottom of the page that gives extraneous information to the reader and refers to a particular part of the text.*
- while;*
- *An endnote is note used by the author to give credit or reference to the text, appearing at the end of the document, essay or book..*
- The two statements should be correct for the award of the two 02 marks*
- (b). Outline any two editing features found in a word processor. (02 marks)
- *Find and search.*
 - *Spelling checker.*
 - *Auto complete.*
 - *Thesaurus.*
 - *Grammar checker.*
 - *Find and replace.*
- (c). Apart from Ms word, mention any other one example of word processing software. (01 mark)
- Lotus word
 - Celframe writes
 - Word perfect
 - Word star
 - Apple pages
 - Latex editor
 - K word
 - King soft writer
 - Open office for Linux
 - Libre office writer
 - Org writer
 - Corel word perfect
 - Abi word
3. (a). state two negative effects of using a computer at home. (02 marks)
- *Initial investment cost can be high (Setting up).*
 - *Extra cost is required to employ specialized staff to operate and design the data processing system.*
 - *Some jobs may be lost due to computerization and thus lower the morale of staff members.*
 - *Some staff has / have to be trained or retrained.*
 - *Face-to-face interactions among staff may be reduced.*
 - *Easier transmission of viruses via the internet, which may lead to creating untimely, costs to the recipient and sender computers.*

- *Computers load personal information, which may be misused. It is easy to misuse personal information held about an individual but privacy rights have been enacted to minimize this.*
- *Problems may arise when computers cannot be used either because they are malfunctioning or damaged. This can bring an organization to a halt if no backup exists.*
- *Security has to be provided to protect personnel and staff from preying eyes.*

Two correct item, 02 marks

(b). Mr Atimango's hard disk is likely to crash because of the unstable power, state any two ways that may be appropriate for ensuring safety of his data. (02 marks)

- *Connecting the computer to the power protection devices*
- *Ensuring that electricity wires are properly insulated and laid by an expert*
- *Backing up data*

(c). While using a Laptop for video conferencing, a webcam plays an important role, write down this role of a webcam? (01 mark)

It is for taking still images, recording videos of the participants and transmitting them over internet

4. (a). Explain any two interferences that may cause computer system damages and data losses (02 mark)

- *Unstable power*
- *Natural disasters*
- *Presence of malware on the computer*
- *Software corruption*
- *Hardware theft*

(b). Define preventive maintenance. (02 marks)

Preventive maintenance refers to performing proactive maintenance in order to prevent system problems

(c). Give two ways computers can be abused. (02 marks)

- *Putting heavy objects onto them.*
- *Leaving computers under the sun and heat.*
- *Eating and drinking near the computer.*
- *Installing and uninstalling computer software or hardware without permission.*
- *Using a computer to commit a crime like hacking.*
- *By not cleaning the environment where computers are being used.*
- *By physically defacing a computer.*
- *By labelling some parts using sharp objects like the screen.*

5. (a). State the difference between system unit and peripheral devices. (02 marks)

- *System devices is a part of a computer that houses the primary devices that perform operations and produce results for complex calculations.*

while;

- *Peripheral devices are computer components that are connected to a computer's system unit e.g. a printer.*

The two statements should be correct for the award of the two 02 marks

(b). Define the term computer literacy. (01 mark)

- *Computer literacy refers to having the knowledge and understanding of computers and their uses.*

- (c). State any **two** circumstances under which digital divide is demonstrated. (02marks)
- *The digital divide typically exists between those in cities and those in rural areas*
 - *between the educated and the uneducated*
 - *between socioeconomic groups; and, globally*
 - *between the more and less industrially developed nations. Even among populations with some access to technology, the digital divide can be evident in the form of lower-performance computers connections such as dial-up, and limited access to subscription-based content.*

6. Using the following words, fill in the spaces provided for (a) to (e) below.

Videoconferencing, Chat rooms, GPS, webcam, E-mail, video, simplex channel.

(05 marks)

- (a). GPS can be used to locate objects in a given region.
- (b). Simplex Channel is a single directional communication method
- (c). E-mail is the transmission of files/message over a network.
- (d). Real-time typed conversations that take place on computers connected to the network are offered by Chat rooms
- (e). Live and video instant communication using a website is referred to as video conferencing and with it, a webcam is used to capture images for uploading.

7. Write short notes on the following:

(a). Peer – to – peer LAN network model.

(02

marks)

- *Peer-to-peer LAN network architecture allows users to share resources and files located on their computers and to access shared resources found on other computers.*

(b). Server computer

(02 marks)

- *Is a dedicated computer that stores, distributes and manages the network resources?*

(c). State one advantage of using a network by an organisation.

(01 mark)

- *User information is easily monitored to ensure privacy while using a network.*
- *Computers allow users to create and manipulate information. Information takes on a life of its own on a network.*
- *The network provides both a place to store the information and means to share that information with other network users.*
- *Administrators, instructors, students and guests can be connected using the campus network. This makes communication easy amongst users.*
- *An organisation can provide services, such as registration, school directories, course schedules, access to research, and email accounts, and many others.*
- *The school can provide network users with access to the internet, via an internet gateway.*
- *The school can provide access to special purpose computing devices which individual users would not normally own. For example, a school network might have high-speed high-quality printers strategically located around a campus for instructor or student use.*
- *Computer networks enable people to access their information from connected devices throughout the organisation. Students can begin an assignment in their classroom, save part of it on a public access area of the network, then go to the media*

centre after school to finish their work. Students can also work co-operatively through the network.

- Collaborative software allows many users to work on a document or project concurrently. For example, educators located at various schools within a county could simultaneously contribute their ideas about new curriculum standards to the same document, spreadsheets, or website.
- Computer peripheral devices can be shared e.g. printers, storage space, etc.

8. (a). What is a computer laboratory? (01 mark)

- Is a place where students learn practical uses for computers, such as programming or how to use a given application program.

(b). State two ways air conditioning is important in a computer laboratory. (02 marks)

- It regulates temperatures in the computer laboratory.
- It reduces the instances of dust in the computer laboratory.
- It helps in the cooling down of computers that have been working.
- It dispels insects that could build in the computer laboratory for example wasps.
- Some remove humid temperatures in the computer laboratory.

(c). Mention two reasons for servicing computers. (02 marks)

- To guarantee continuous use of a computer.
- To remove dust particles from a computer.
- To upgrade computer software or hardware.
- To remove computer viruses from a computer.

9. (a). Write the difference between cold and warm booting. (01 mark)

- **Cold booting** is the process of turning on a computer after it has been powered off completely,

While,

- **Warm booting** is a method of resetting a computer system that is already powered on.

(b). In relation to booting a computer, state one function of the following:

(i). P-O-S-T (01 mark)

- Tests the sequence that a computer's BIOS runs to determine if the connected devices are working correctly.

one correct item, 01 mark

(ii). BIOS (01 mark)

- Contains the basic input/output system (BIOS), which is a sequence of instructions the computer follows to load the operating system and other files when the computer is turned on.

(c). State **two** reasons that may necessitate a user to restart a computer. (02 marks)

- Commonly used to recover from errors that cannot be recovered.
- When a computer locks or freezes.
- After installing of certain new software program.
- After installing a new hardware device like a flash disk.
- After uninstalling a hardware device.
- After uninstalling a software program.
- When the computer slows down.
- After changing CMOS or BIOS setup.

10. (a). What is a malicious software? (01 mark)

- *This is software designed to infiltrate or damage a computer system without the owner's informed consent.*

OR

- *Is a computer program that disturb the routing performance of a computer?*

(b). State two ways computer viruses are transmitted. (02 marks)

- *By downloading files and software from the internet.*
- *By sharing and using storage devices in multiple computers.*
- *By opening e-mail attachments that are infected.*
- *By installing software that is already loaded with a virus.*
- *Through computer crime like hacking, cracking.*
- *By sharing files, devices, etc. across the network.*

Two correct item, 02 marks

(c). Mention how the following can control the spread of computer viruses:

(i). Antivirus program. (01 mark)

- *It detects computer viruses.*
- *It cleans files that are infected with computer viruses.*
- *It isolates / quarantines / Vault computer viruses.*
- *It blocks installation of programs that are infected or whose certificate is not trusted.*
- *It scans files and devices with computer viruses.*
- *It deletes computer files that have viruses.*

One correct item, 01 mark

(ii). Use of passwords. (01 mark)

- *It authenticates the user to give access to a device, file, program or software.*

One correct item, 01 mark

11. You are given the following table:

	A	B	C	D	E
1	Item code	Name	Quantity	Selling price	Total Amount
2	D001	Rwenzori	200	900	
3	D004	Kibuku	400	900	
4	D010	Kazire	600	900	
5	D030	Club Ambiance	1,200	1,500	
6	D030	Mirinda	800	1,500	
7	D100	Kazero	1,000	250	

(a). State the application program you will use to organise this work.

(01 mark)

- *Spreadsheet application program.*

One correct item, 01 mark

(b). What data type will be suitable for the data in the item code field?

(01 mark)

- *Text.*

One correct item, 01 mark

(c). Write the formula that will return Total Amount for Club Ambiance. (01 mark)

*=C5*D5*

=PRODUCT(C5:D5)

=PRODUCT(C5,D5)

One correct item, 01 mark

(d). Write a function that will return the highest value of quantity. (01 mark)

=Max(C2:C7)

OR

=Max(C2,C7)

One correct item, 01 mark

(e). State one practical application of this program in a primary school. (01 mark)

- To prepare roll call sheets.
- To prepare a school budget.
- To grade and analyse students' results.
- To manage and create teaching timetables.
- To prepare payrolls for workers.
- To track expenses like electricity.
- To track school assets like food and other stock items.
- It is used to prepare sitting plans for candidates.
- To prepare lists and assignment of index numbers automatically to students.

One correct item, 01 mark

12. (a). What is a software suite?

(01 mark)

A software suite is a collection of individual application software packages sold as a single entity.

One correct item, 01 mark

(b). Give the difference between shareware and freeware programs. 01 mark)

Shareware is copyrighted software that is distributed free for a trial period, and payment is required for using the software beyond that trial period,

While;

Freeware is copyrighted software provided at no cost to users.

(c). Write short notes on the following:

(i). software upgrade.

(01 mark)

A software upgrade is a newer version of software you currently use of a more fully-featured version of your current software.

One correct item, 01 mark

(ii). Software bug.

(01 mark)

Software bug refers to an error in the programming code that does not permit it to function.

One correct item, 01 mark

(iii). Hotfix

(01 mark)

A hotfix is a software update designed to fix a bug or security hole in a program.

A hotfix is deployed to improve or upgrade software after it has been released.

One correct item, 01 mark

13. (a). State two advantages of using e-commerce in business. (02 marks)

- Transactions can occur immediately and globally, thus save time for participants on both ends.
- Transactions can occur 24 hours per day.
- Businesses have access to millions of people with Internet connections.
- Businesses have the ability to gather customer information, analyze it, and react if appropriate.
- Information can be changed and be available quickly.

- *Customers can compare prices easily.*
- *Feedback can be immediate.*
- *Manufacturers can buy and sell directly, avoiding the cost of the middleman.*
- *Distribution costs for information is reduced or eliminated.*

Two correct item, 02 marks
(01 mark)

(b). Mention one example of web browser.

- | | |
|----------------------------|----------------------|
| • <i>Internet Explorer</i> | • <i>Kazekhase</i> |
| • <i>Mozilla Firefox</i> | • <i>Amaya</i> |
| • <i>Opera</i> | • <i>NetPositive</i> |
| • <i>Safari</i> | • <i>QNX Voyager</i> |
| • <i>Google Chrome</i> | • <i>Planetweb</i> |
| • <i>Konqueror</i> | • <i>Netscape</i> |
| • <i>Arora</i> | • <i>Lunaspase</i> |
| • <i>Dillo</i> | • <i>Flock</i> |
| • <i>K-Meleon</i> | • <i>Avant</i> |
| • <i>Lynx</i> | |
| • <i>Lobo</i> | |

One correct item, 01 mark

(c). What is a:

(i). A bounce mail?

(01 mark)

Bounce mail is electronic mail that is returned to the sender because it cannot be delivered for some reason.

One correct item, 01 mark
(01 mark)

(ii). An email address?

This is a combination of a user name and a domain name that identifies a specific user who sends or receives an e-mail.

14. (a). Define the term computer communication.

(01 mark)

Computer communication refers to one computer transferring data, instructions, and information to another computer or some other computers.

One correct item, 01 mark
(02 marks)

(b). Mention any two electronic data communication.

- *VoIP (VoIP, abbreviation of voice over Internet Protocol).*
- *Voice mail.*
- *Fax.*
- *E-mail, or electronic mail.*
- *BBS: A bulletin board system (BBS).*
- *Instant messaging.*
- *Chat rooms.*
- *Newsgroups.*
- *Internet telephony.*
- *Videoconferencing*
- *Groupware.*
- *Telecommuting.*
- *Global positioning system (GPS).*
- *FTP: (File Transfer Protocol).*
- *Blog.*

- *RSS (Rich Site Summary) (originally RDF Site Summary, often dubbed Really Simple Syndication).*
- *Wiki.*
- *Internet.*
- *Web 2.0*
- *Web collaboration.*

Two correct item, 02 marks

(c). Give two advantages of telecommuting to an organisation. (02 marks)

- *Reduces the time and expenses for travelling to and from work.*
- *Eliminates travelling during unsafe weather conditions.*
- *Allows a flexible work schedule for employees.*
- *Provide a convenient, comfortable work environment for disabled employees or those recovering from injury or illness.*
- *Reduces air pollution caused by vehicles driven to and from work.*
- *Employers reduce costs due to less office space and furniture is required.*

Two correct item, 02 marks

15. (a). Write the following acronyms in full

(i). FTP

(01 mark)

File Transfer Protocol

One correct item, 01 mark

(ii). SMTP

(01 mark)

Simple Mail Transfer Protocol

One correct item, 01 mark

(iii). TCP/IP

(01 mark)

Transmission Control Protocol/Internet Protocol

One correct item, 01 mark

(b). Mention any two factors you will consider before establishing a network.

(02 marks)

- *Cost of installation.*
- *Number of computers and other devices.*
- *Architecture of the building to be used.*
- *Purpose of the network.*
- *Distance of connectivity.*
- *Safety provisions of the network.*
- *Personnel provisions/technicalities involved.*
- *Ease in accessing the network/ speed on the network.*
- *Future growth of the organization and expansion of the network.*

Two correct item, 02 marks

16. (a). What is a transmission medium?

(02 marks)

Transmission medium is a communication channel that carries the information from the sender to the receiver.

Two correct item, 02 marks

(b). Mention one danger of using wireless communication in an organisation.

(02 marks)

- *Network security is a challenge to many organisations.*
- *There is a lot of interference by obstacles like trees, e.t.c.*

- *Inconsistent connections.*
- *Wireless communication becomes slower when the user goes away from the hotspot.*

(c). Why are majority of organisations still using cable networks? (01 mark)

- *They are cheap to use and trunk.*
- *Signals are still strong even for a longer distance.*
- *Some computers are still using network interface cards that support cables only.*
- *Some computers have already established a cable network.*
- *Some organisations are still having network administrators who still feel that cables are still useful for data communication.*

One correct item, 01 mark

17. (a). Give two differences between RAM and ROM. (02 marks)

- *Content in RAM is temporary, while, contents in ROM are permanent.*
- *RAM is used to store files and programs currently the computer is working with, while, ROM stores its content for good.*
- *RAM is volatile and ROM is non volatile.*
- *RAM can be discussed when buying a computer, while, ROM is not mentioned at all.*
- *The amount of RAM can influence speed and performance of a computer, while, ROM has no relationship with the computers' speed.*
- *System requirements always emphasise and mention the amount of RAM the system should have as minimum for the proper performance of a software or hardware, while, ROM is not mentioned anywhere under the system requirements.*

Two correct item, 02 marks

(b). Write one function to the following parts in a CPU.

(i). Control Unit.

(01 mark)

It directs and coordinates most of the operations in the computer.

One correct item, 01 mark

(ii). Arithmetic and Logical Unit.

(01 mark)

It performs the arithmetic, comparison, and logical operations. Arithmetic operations include addition, subtraction, multiplication, and division.

One correct item, 01 mark

(iii). Registers.

(01 mark)

Are high-speed temporary storage locations used to hold data and instructions.

One correct item, 01 mark

18. (a). State any two applications of artificial intelligence today in computing. (02 marks)

- | | |
|--|---|
| • <i>Game playing</i> | • <i>Rapid development environments.</i> |
| • <i>Speech recognition</i> | • <i>The linked list data structure.</i> |
| • <i>Understanding natural language</i> | • <i>Automatic storage management.</i> |
| • <i>Computer vision</i> | • <i>Symbolic programming.</i> |
| • <i>Expert systems</i> | • <i>Functional programming.</i> |
| • <i>Heuristic classification</i> | • <i>Dynamic programming and object-oriented programming.</i> |
| • <i>Time sharing.</i> | • <i>Finance</i> |
| • <i>Interactive interpreters.</i> | • <i>Hospitals and medicine</i> |
| • <i>Graphical user interfaces and the computer mouse,</i> | • <i>Heavy industry</i> |

- *Transportation*
- *Telecommunications*
- *Music*
- *Aviation*
- *News and publishing*
- *Speech and text recognition,*
- *E-mail spam filtering*
- *Applications are also being developed for gesture recognition (understanding of sign language by machines).*
- *Individual voice recognition.*
- *Global voice recognition (from a variety of people in a noisy room).*
- *Facial expression recognition for interpretation of emotion and non verbal cues.*
- *Robot navigation*
- *Obstacle avoidance*
- *Object recognition*

**Two correct item, 02 marks
(01 mark)**

(b). Mention one branch of digital forensics.

- *Computer forensics*
- *Mobile device forensics*
- *Network forensics*
- *Database forensics*

**One correct item, 01 mark
(01 mark)**

(c). (i). What is green computing?

- *The creation of environmentally sustainable computing or IT.*
- *The study and practice of designing, manufacturing, using, and disposing of computers, servers, and associated subsystems—such as monitors, printers, storage devices, and networking and communications systems — efficiently and effectively with minimal or no impact on the environment.*

**One correct item, 01 mark
(01 mark)**

(ii). Give one goal of green computing.

- *To reduce the use of dangerous materials,*
- *To maximize energy efficiency during the product's lifetime,*
- *To promote the recyclables or biodegradability of outdated products and factory waste.*

19. (a). Outline two duties carried out by:

(i). Computer support specialist. (02 marks)

- *A computer support specialist assists people when they are having technical trouble with their computers.*
- *Because most of the computer problems can be solved via e-mail or by phone, all computer support specialists need to possess excellent communication and explanatory skills as they need to be able to give step-by-step directions so customers can solve the problems themselves.*
- *They are usually responsible for installing everything from software, printers, Wi-Fi, and other computer tools and components.*
- *They teach customers how to properly use the new devices and even write instructional handbooks.*
- *They check company's computer systems every day to ensure they are operating correctly or working for a school and assisting other teachers and administrators who are having computer issues.*
- *Most of their work consists of dealing with people who are not as technologically gifted as they are and it's important that they remember this and be patient when customers do not understand how to correct the issue the first time.*

*Two correct item, 02 marks
(02 marks)*

(ii). Systems Analyst.

- *Writing instruction manuals for systems*
- *Consulting with managers to determine what role the systems play in the business*
- *Testing the systems on a regular basis to ensure quality and function*
- *Preparing costs and benefits analysis on systems*
- *Brainstorming new ways to add more functionality to systems*
- *Choosing and configuring the hardware and software of a system*
- *Training users on how to appropriately utilize their computer systems*

Two correct item, 02 marks

(b). Mention one way you can care for a school network. (01 mark)

- *Cables should not run on the floor.*
- *Network cables should not cross be crossed with electricity cables.*
- *Frequently, cables should be checked for ascertain that they are working well.*
- *Firewalls should be activated to ensure that hackers and intruders do not cross the network campus or neighbourhood.*
- *Some network gadgets should be made un available by encrypting or providing details for network log in.*
- *Communication devices should be supplied with regular and necessary amounts of power.*

One correct item, 01 mark

20. (a). State the difference between a file and a folder. (01 mark)

*A file is a collection of related content that is stored as a single unit,
while;*

A folder is a directory where many files are stored.

(b). Outline the steps you take to restore a deleted file from the recycle bin. . (02 marks)

Right click the recycle bin

Select open to view deleted files/folders

Right click the deleted file / folder

Select and click restore

Two correct item, 02 marks

(c). Give two causes of data loss in an organisation. (02 marks)

- *System failure.*
- *Computer virus.*
- *Accidental deletion.*
- *Computer crime.*
- *Use of old storage devices.*
- *Poor handling of storage devices.*

Two correct item, 02 marks

END