

1. 1(a). 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*

- (b). 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*

- (c). Mention two devices that can be used to enter computer instructions. (02 marks)

- *Keyboard.*
- *Mouse.*
- *Tracker ball.*
- *Joystick.*
- *Microphone.*
- *Remote controller.*
- *Touch pad / glide pad.*
- *Touch screen.*
- *QR code reader.*
- *Biometric devices (finger print recognition, iris reader, e.t.c.)*
- *Integrated pointing device (mainly on old laptop computers)*

*Two correct item, 02 marks*

2. (a). Give the distinction between editing and formatting a document. (02 marks)

*Editing refers to correcting / adjusting / making corrections in a document to make it accurate (free from mistakes),*

*while;*

*Formatting refers to making changes to enhance the appearance of a document.*

*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.*

*Two correct item, 02 marks*

**(c). How is a light pen used in a word processor?**

**(01 mark)**

*It is used to draw oval objects in a word processor.*

*Any one correct item, 01 mark*

**3. (a). Mention two dangers of using a computer at home.**

**(02 marks)**

- *Initial investment cost can be high (Setting up).*
- *Extra cost is required to employ specialised 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). State any two parts that make up an e-mail address.**

**(02 marks)**

- *User name.*
- *A symbol @ that separates the username and a domain name.*
- *Domain name.*

*Two correct item, 02 marks*

**(c). While composing a mail, what is the use of the “TO” field? (01 mark)**

*It is where the addresses of mail recipients or beneficiaries are written.*

*Any one correct item, 01 mark*

**4. (a). What are I/O devices? (01 mark)**

*These are computer peripheral devices that a user can work with while interacting with a computer set.*

*Any one correct item, 01 mark*

**(b). State two examples of I/O devices. (02 marks)**

- *Keyboard.*
- *Mouse.*
- *Monitor.*
- *Printer.*
- *Speakers.*
- *Touch screens.*
- *Tracker ball.*
- *Touch pad / glide pad.*
- *Light emitting diode.*
- *Microphone.*
- *Remote controller.*
- *QR code reader.*
- *Bar code reader.*
- *Biometric devices.*
- *Stylus pen / light pen.*
- *MIDI interface.*
- *External hard drives. – e.t.c.*

*Two correct item, 02 marks*

**(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.*

*Two correct item, 02 marks*

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

*System devices* are computer devices found and located inside a computer's system unit / case or cabinet, e.g. fixed hard drive;

*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.*

*Any one correct item, 01 mark*

**(c). Mention any two examples of specialised application programs.**

**(02 marks)**

- *Accounting package.*
- *Computer Aided Design.*
- *Customer Relations Management (CRM).*

*Two correct item, 02 marks*

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

**Videoconferencing, RSS feed, GPS, webcam, spreadsheets, 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). Multimedia is largely made up of a video.
- (d). instant breaking news on a website can easily be accessed using a /an RSS
- (e). Live and video instant communication using a website is referred to as vide 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). Web server. (02 marks)**

*Is a dedicated computer that stores, distributes and manages web pages.*

**(c). State one advantages 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 center 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, e.t.c.*

*Any one correct item, 01 mark*

**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 spreadsheet program.*

*Any one correct item, 01 mark*

**(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.*

*Two correct item, 02 marks*

**(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.*

*Two correct item, 02 marks*

**9. (a). Give 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** alternatively referred to as a soft boot, a warm boot is one 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). pressing CTRL+ALT+DELETE (01 mark)**

*The computer is restarted.*

**(ii). BIOS**

*one correct item, 01 mark*  
**(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 a user may 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.*

*Two correct item, 02 marks*

**10.(a). What is a computer virus?****(01 mark)**

*Is a computer program that disturb the routing performance of a computer.*

*One correct item, 01 mark*

**(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, e.t.c. 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 isolâtes / quarantaines / vaults 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 and provides access to a device, file, program or software.

*One correct item, 01 mark*

**11. You are given the following table:**

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>1</b>	Item code	Name	Quantity	Selling price	Total Amount
<b>2</b>	C001	Mirinda	200	900	
<b>3</b>	C004	Pepsi	400	900	
<b>4</b>	C010	Quencher	600	900	
<b>5</b>	C030	Ribena	1,200	1,500	
<b>6</b>	C030	Rwenzori	800	1,500	
<b>7</b>	C100	PK Sweets	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)**

- *AutoNumber.*
- *Text.*

*One correct item, 01 mark*

**(c). Write the formula that will return Total Amount for Ribena. (01 mark)**

*=C5\*E5*

*=PRODUCT(C5:E5)*

*=PRODUCT(C5,E5)*



*One correct item, 01 mark*

**(d). What will happen when you enter Rwenzori after Ribena? (01 mark)**

- *the spreadsheet is automatically updated.*
- *Values are automatically recalculated.*

*One correct item, 01 mark*

**(e). State one practical application of this program in your 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 purchase of 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). Beta software****(01 mark)**

*Is a type of software provided to people for testing purposes.*

*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*

**(b). Mention one example of web browser.****(01 mark)**

- *Internet Explorer*
- *Mozilla Firefox*
- *Opera*
- *Safari*
- *Google Chrome*
- *Konqueror*
- *Arora*
- *Dillo*
- *K-Meleon*
- *Lynx*
- *Lobo*
- *Kazexhase*
- *Amaya*

- *NetPositive*
- *QNX Voyager*
- *Planetweb*
- *Netscape*
- *Lunascape*
- *Flock*
- *Avant*

*One correct item, 01 mark*

**(c). What is a:**

**(i). Web forum?**

**(01 mark)**

*Is a site where people discuss various topics.*

*One correct item, 01 mark*

**(ii). Web mail?**

**(01 mark)**

*A site that provides a web mail service.*

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

**(01 mark)**

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

*One correct item, 01 mark*

**(b). Mention any two tools of computer communication.**

**(02 marks)**

- *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). BBS (01 mark)**

*Bulletin board service*

*One correct item, 01 mark*

**(iii). TCP/IP (01 mark)**

*Transmission Control 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). Give two forms of wireless communication devices. (02 marks)**

- *Broadcast radio.*
- *Cellular radio.*
- *Microwaves.*
- *Communications satellites.*
- *Infrared (IR).*

*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)**

- *Game playing*
- *Speech recognition*
- *Understanding natural language*

- *Computer vision*
- *Expert systems*
- *Heuristic classification*
- *Time sharing.*
- *Interactive interpreters.*
- *Graphical user interfaces and the computer mouse,*
- *Rapid development environments.*
- *The linked list data structure.*
- *Automatic storage management.*
- *Symbolic programming.*
- *Functional programming.*
- *Dynamic programming and object-oriented programming.*
- *Finance*
- *Hospitals and medicine*
- *Heavy industry*
- *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*

**(b). Mention one branch of digital forensics.**

**(01 mark)**

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

*One correct item, 01 mark*

**(c). (i). What is green computing?****(01 mark)**

- *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*****(ii). Give one goal of green computing.****(01 mark)**

- *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*

**(ii).Systems designer.**

**(02 marks)**

- *They work in computer systems design create computer and IT systems that allow businesses and other entities to operate effectively and efficiently.*
- *They facilitate these computer and IT systems, working to design custom software programs, manage computer and information systems, as well as manage computer facilities.*
- *Work may be done onsite for one particular company, or you might do your work on a contract basis for several organizations.*
- *Some computer systems designers specialize in a particular service, like websites, e-commerce, and data centers. Information security has become a growing concern for organizations, and computer systems designers are increasingly being used to manage these threats.*
- *Some work in computer operations centers if they specialize in facilities management and maintenance, and others are able to work from home or other remote locations.*

*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 create a folder on your desktop. (02 marks)**

- *Right click the desktop,*
- *Select new, Folder.*

*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**