

## TOPIC 3: COMPUTER LAB CARE AND MAINTENANCE

### Define the term Computer Literacy?

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

**OR**

*It refers to the knowledge and ability to use computers and related technology efficiently.*

### Suggest possible ways how you promote Computer Literacy in your community.

- *Through undertaking computer training courses.*
- *Through attending workshops.*
- *Through practical hands on.*
- *Through reading computer related literature.*
- *Through carrying out research.*
- *By use of the internet where resourceful tutorials can be downloaded for use.*

### Describe the challenges or limitations of Computer Literacy in your Community today.

- *Computer phobia - people fear to use computers.*
- *Myths about using a computer e.g. You will kill your sight.*
- *Expensive hardware and software components.*
- *Restricted to well to do people.*
- *Some places lack connection to the power grid*

### State two ways you can improve computer literacy in your school.

- *Through undertaking computer training courses.*
- *Through attending workshops.*
- *Through practical hands on.*
- *Through reading computer related literature.*
- *Through carrying out research.*

### What is a computer laboratory?

*Is a place where students learn practical uses for computers, such a programming or how to use a spreadsheet program.*

### State the difference between software upgrade and software update.

*Software update provides bug fixes and minor software improvements and is made available by free download, while;*

*Software upgrade is a purchase of a new version of software you currently use of a more fully-featured version of your current software*

### Suggest examples of commonly used hardware and software upgrades today

#### Hardware upgrades

- *Install additional RAM*
- *Adding a larger hard disk*
- *Replacing microprocessors*

#### Software upgrades

- *Changing the version of the operating system*
- *Changing the newer version of office suite*
- *Changing the version of the anti-virus*

### Explain the measures that are intended to protect users in a computer laboratory

- *Having all wires insulated to avoid electric shock*

- *Having the room well ventilated and installing air conditioners.*
- *Having enough space in the lab for movement.*
- *Avoid over crowding.*
- *Using comfortable and standard furniture to avoid poor posture.*
- *Using LCD monitors other than CRT monitors or*
- *Providing antiglare screens and adjustable screens to avoid eye strain brought by over bright light from the monitor screen.*
- *Cables should be laid away from users' paths to avoid users falling while passing through.*

**Suggest possible measure to protect computers safe in the Computer Laboratory.**

- *Burglar proofing the room. (fitting grills on doors, windows and having a roof)*
- *Installing the intrusion detection system (IDS)*
- *Employing security guards.*
- *Installing fire prevention and control equipment. (fire extinguishers)*
- *Having stable power supply. (surge protectors, standby generator, uninterruptible power supply)*
- *Installing lightening arrestors.*
- *Insulating all power sockets.*
- *Follow the computer lab rules and regulations.*
- *Dust and dump proofing. (cleaning the computers daily, air conditioning systems, fitting curtains into windows)*

**Explain the importance of servicing and maintenance of computers regularly**

*To prolong the life span of hardware and software.*

*To ensure the proper functioning of the computer.*

*To update outdated software programs such as antivirus, Operating System, application software.*

*To increase the efficiency of the computer.*

*To increase functionality of the computer.*

*To remove faulty hardware and replace with new ones thus preventing system failure*

**Describe the activities involved in servicing and maintenance of computers.**

- *Repairing and replacing damaged parts.*
- *Upgrading software.*
- *Installing power guards/surge protectors.*
- *Scanning devices before use*
- *Disk cleaning*
- *Emptying recycle bin*
- *Firewall activation*
- *Disk defragmentation*
- *Upgrading software*
- *Blowing dust off*
- *Installing software and*
- *Covering computers with dust or water proof jackets.*

**List the tools used in servicing and maintenance of computers in the Computer Laboratory**

- *Screw driver*
- *Needle nosed pliers*
- *Wire cutters*
- *blower*

**State the ways of how computer hardware can be kept safe in a laboratory**

- *Burglar proofing the room.*
- *Installing fire prevention and control equipment.*
- *Providing stable power supply.*
- *Installing lightening arrestors on the computer room*
- *The room should be well laid out with enough space for movement.*
- *Dust and damp proofing the computer room.*
- *Cables and power sockets should be well insulated and of the correct power rating to avoid short circuits that can damage computer components.*
- *The users should not eat or drink in the computer laboratory.*

**State the ways computers can be damaged in a laboratory.**

- *Defacing computers by use of sharp objects like a campus.*
- *Eating and drinking in the lab.*
- *Placing computers on non flat surfaces.*
- *Using un grounded power sources.*
- *Opening a computer when it is running.*
- *moving the computer while it is running.*
- *Working with a computer in a dusty environment.*

**Mention ways how computers can be safeguarded against damage in a computer laboratory.**

- *Placing a computer on a flat surface.*
- *Avoid drinking and eating in a computer lab.*
- *By following strict rules in laboratory.*
- *Installing antivirus programs on the computers.*
- *Using of passwords.*
- *Instituting a user log.*
- *Sensitizing computer users.*
- *Punishing / fining offenders.*
- *Activating a firewall facility in the computer laboratory.*

**Differentiate between Clicking and Dragging as used in computer.**

**Clicking** refersto the pressingthe primarykey to issuea commandto a computer, **while** The termdragisalsousedmoregenerallyto refer toanyoperationin which the mousebuttonishelddownwhilethemouseismoved.

**Definethe term‘digitaldivide’.**

Isasocialissuereferringto the differingamountof informationbetweenthosewho haveaccesssto the Internet(especiallybroadbandaccess)andthosewhodonot haveaccess

**Mentiontwo waysIT isofadisadvantagetolearning.**

- *Faceto faceinteractionbetweenstudentsandteachersmaybereduced.*
- *Studentscanonlyfollowwhatthe CALpackagesarepredefinedto offer*

**Mention one function of the following Windows' icons:**

- (i). **Recycle bin** :It keeps recently deleted work from the computer
- (ii). **My Computer**.This shows all resources in the computer including drives, control panels and data.
- (iii). **Internet Explorer**.This enables the user to view content in the Website.

**Explain the importance of distant learning to students in a society**

- Help youngster to read, write, count and spell
- Personal and business communications
- Organize names and addresses of academic friends
- Communicate with others around the world using e-mail and chat rooms
- Internet access
- Access a wealth of informations such as news, stock prices, and educational materials
- Shop for goods and services
- Communicate and exchange information with other people around the world
- Provide information to others (e.g., a homepage)

**Why should a user shut down a computer well? Give two reasons.**

- It enable the computer carry out its routine of file management well.
- It enables the computer to register components under its care.
- To enable the computer to start with no interruption at the next booting process.
- To control dangers of damaging the operating system.

**State any two ethical issues that need mention while in a computer lab.**

- Avoid smoking or exposing computers to dust.
- Avoid carrying food and beverages to the computer room.
- Avoid unnecessary movements in the computer lab.
- Do not open the metallic covers of computers.
- Follow the correct procedures of starting and shutting down computers.

**Give one function of each of the following tools found in a computer lab**

**(a) UPS(Uninterruptible Power Supply)**

- It provides immediate temporary power in case of main power supply failure
- It provides stable/constant voltage even during voltage fluctuation from main power supply
- It saves the equipment from power surges or any other electrical disturbance.
- It also charges the backup battery using the power from main/secondary power supply
- It provides adequate time opportunity to immediately backup your data and secure the operating system to perform the shutdown procedures when the main powers outages
- They can do diagnosis and management of his own making it easier to users to anticipate if there will be disruption to the system.

**(b) Woolen carpet**

- The woolen carpet is used to trap dust that enters in the computer laboratory
- Insulating the users feet from direct contact with cold floors
- It makes a computer lab more comfortable
- It also insulates the user from electrical contact with the ground

**Mention two reasons for studying ICT in schools.**

- *To help learners develop and consolidate their knowledge of ICT and be aware of new and emerging technologies.*
- *To encourage learners to develop as independent users.*
- *To encourage learners to develop ICT skills to enhance work productivity in a variety of subject areas.*
- *To empower learners and prepare them for lifelong learning.*

**Mention two causes of system failure.**

- *Aging hardware*
- *Natural disaster (e.g. fires, floods, storms, or earthquakes)*
- *Electrical power variation*

**Give one way system failure can be controlled**

- *Frequent backup of data.*
- *Installation of UPS.*
- *Installation of fire fighting gadgets.*
- *Replacing old hardware with new hardware.*
- *Use of power regulators.*
- *Use of surge protectors*

**Define the following computer terms:**

**(a). Footer:** *Is text that is separated from the main body of text and appears at the bottom of a printed page margin.*

**(b). Character map**

*The Character Map utility is free on all Windows machines and can be used to copy characters not found on the keyboard into any Windows application.*

**(c). Hyperlink.**

*Is a reference to data that the reader can directly follow, or that is followed automatically to a section within a page or entirely a new document or file..*

**(d). Computervirus.**

*Is a computer program that can replicate itself and spread from one computer to another causing damage to the computer.*

**(e). Primary key**

*Uniquely identifies each record in a database table.*

**In a practical sense, state the meaning of the following:**

**(i). Clicking**

*Clicking is most commonly used with a computer mouse when the pointer is placed over an icon or object and the button pressed twice.*

**(ii). Double click**

*Double click is most commonly used with a computer mouse when the pointer is placed over an icon or object and the button is quickly pressed twice. This action, when performed without moving the location of the mouse, will produce a double click.*

**(iii). Drag**

*Is a pointing device gesture in which the user selects a virtual object by "grabbing" it and moving it to a different location or onto another virtual object.*

**(e). Drop.**

*Refers to releasing an object that has been dragged.*

**(f). Scroll.**

*Refers to moving a page either direction in order to see hidden work, zoom in or out, e.t.c*

**Mention two uses of a mouse in data processing.**

- *To select a document.*
- *To play a computer game.*
- *To control movement of the cursor.*
- *To input text.*
- *To draw objects.*

**Outline any three in which ICT can improve the quality of education.**

- *Computer Based Learning/Training*
- *Electronic learning*
- *Computer based simulation*
- *Computer Aided instructions*

**List five elements that can be displayed on the desktop screen of a normal working screen.**

- Background*
- Icons- My computer, My Documents, Recycle bin, Internet Explorer*
- Taskbar*
- Start button*
- System tray/ notification area*

**State two uses of ICT in your school.**

*Computer-based training, which includes*

- ***Computer-assisted instructions (CAI)***, so that teachers can use computers and other IT equipment to present teaching materials in a more interesting way.
- ***Computer-assisted learning (CAL)***, so that students can use computers and appropriate software to learn at their own pace.
- ***Computer-assisted assessment (CAA)***, which may reduce the time and labor to mark the answer scripts.
- *Distance learning through computer-based training and Web-based training.*
- *Simulations of experiments or real-life situations that may be hazardous.*
- *Electronic library system for searching, borrowing, and returning books.*
- *The School Administration and Management System (SAMS) for keeping records of students and producing report cards or other related documents.*

- *Edutainment, which is a type of educational software that combines education with entertainment.*

**State two ways air conditioning is important in a computer laboratory.**

- *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.*
- 

**Mention two accidents commonly experienced in a computer laboratory.**

- *Fire accidents.*
- *Skin cuts.*
- *Lightening.*
- *Electric shocks.*

**Give one reason why a school director would purchase the following equipments for a computer laboratory.**

**a)Blower**

*To compress air to blow out dust and debris from the slot and fans*

**b)Anti-glare filter screens.**

*Helps to reduce mirror like reflections and regulate amount of light off the screen which cause eye strain*

**(c) Air conditioner.**

- *To control dust, dampness and humidity.*
- *It also regulates room temperature recommended for both users and computers*

**Under what circumstances may a user carry out the following activities?**

**(i). Software updating.**

*When one wants to increase, modify or add software functionality of the same version.*

**(ii). Computer restarting.**

- *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.*
- *When a computer has a virus, it can restart itself*

**List three ways computers are used at home to promote education.**

- *Carrying out educational research.*
- *Communicating educational issues with parents, colleagues, e.t.c.*

- *Completing assignments, exercises and home works while at home.*
- *Encourages educational online corroboration.*
- *Encourages online teaching, examinations and other issues.*
- *Students can carry out / do projects from home for example workgroup computing.*
- *Students can play academic games for leisure activities.*
- *Using the internet, students can access a wealth of information that might be needed to promote teaching and learning.*

**(b). Give two advantages of carrying out online purchase.**

- *Faster buying/selling procedure, as well as easy to find products.*
- *Buying/selling 24/7.*
- *More reach to customers, there is no theoretical geographic limitations.*
- *Low operational costs and better quality of services.*
- *No need of physical company set-ups.*
- *Easy to start and manage a business.*
- *Customers can easily select products from different providers without moving around physically.*
- *It is cheap.*