COMPUTER STUDIES

FORM 3

KAMUZU BARRACKS COMMUNITY DAY SECONDARY SCHOOL

INTRODUCTION TO COMPUTERS

Definition of a Computer

- A **computer** is an electronic device that processes **data** to **information**.
- It is said to be **electronic** because it uses electricity (electrical signals) to process the given data.
- Other examples of electronic devices are:
  - Calculators, Radios, Smart phones, Television sets, etc.
- The processing of data to information by a computer is made possible by a set of instructions called **programs** or **software**.

INTRODUCTION TO COMPUTERS

Data and Information

- **Data** refers to the **raw facts** that do **not** have much meaning to the user.
- Examples of data may include *numbers*, *letters* and *symbols*.
- Data is the **input** that the user pass to the computer to be processed to information.

- **Information** is the processed data that is meaningful to the user.
- In other words we can say it is the product of data and process.
- Information is the **output** that the computer pass back to the user after processing the given data.
- Information may be in the form of *text* and *graphics*, *sound* or *video*.

CHAPTER: ONE

INTRODUCTION TO COMPUTERS

- A computer can therefore be defined in terms of input, process and output functionalities as shown in figure 1 below.
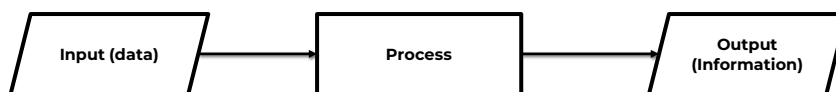

Figure 1: *Computers data processing functionality*

CHAPTER: ONE

INTRODUCTION TO COMPUTERS

Other computer related terms
- **Technology** refers to the application of scientific knowledge for practical purpose.
- **Information Technology (IT)** refers to the use of hardware, software and their technologies to collect, organise, process, secure, store, exchange or disseminate information.
- **Communication** refers to the exchanging of information using medium such as telephone and computers.
- **Communication Technology (CT)** refers to the use of devices and communication channels to transmit information correctly, efficiently and cost-effectively.
- Examples of communication devices include: radio transmitters and receivers, telephones, satellites, fax machines, etc.
- *Communication channel* refers to the path over which the communication signals can pass, such as telephone lines and radio waves.

CHAPTER: ONE

INTRODUCTION TO COMPUTERS

- **Information and Communication technology (ICT)** refers to the integration of communication technologies and information technologies for the purpose of acquiring, processing, storing, standardising and disseminating information for public consumption.
- **Information Systems (IS)** refers to a set of components namely persons, procedures *or* hardware and software resources that collect, process and deliver information in a given organisation.
- **Note:** *Information Systems does not necessarily rely on Information Technology, manual files, pen and paper may be used. Information technology (IT) is there to **enhance the productivity by automating** Information system(IS) processes.*

CHAPTER: ONE

INTRODUCTION TO COMPUTERS

Garbage in garbage out (GIGO)

- **In computing GIGO** is a rule stating that the **quality of the output** is a function of the **quality of the input**; put garbage in a computer and you get garbage out from the computer.
- In other words we can say that the phrase implies that if erroneous data is entered in a computer and the command to process it is given, the computer will output erroneous results.
- In simple terms we can say that if you input wrong data in a computer, you will get wrong information from the computer.

INTRODUCTION TO COMPUTERS

Practice Questions:

- Define the following terms:
  a. Computer
  b. Information
  c. Data
  d. Technology
  e. Information Communication technology (ICT)
- Draw a block diagram to show a computer's data processing functionality.
- Give **three** examples of electronic devices.

Books Used

Reference

- Nasalangwa A., Chemwa G. & Mburu S, (2012). *Excel and Succeed Senior Secondary Computer Studies – Form 3.* Longhorn.

CHAPTER: ONE