INTRODUCTION TO SPREADSHEET SOFTWARE

This is an example of application software. A spreadsheet is essentially a ledger sheet that lets you enter, edit and manipulate numeric data.

There are two types of spreadsheet namely:

- Manual spreadsheet
- Electronic spread sheet

MANUAL SPREADSHEET

This is the most commonly used type of book keepers as a ledger book with many sheets of papers divided into rows and columns in which amount of money are entered manually using a pen or a pencil

ELECTRONIC SPREADSHEET

A type of software that offers the user a visual display of a simulated worksheet and the means of using it for financial plans, budgets, etc. In short, electronic spreadsheet is software that is used to analyze numerical data.

Advantages of using electronic spreadsheet over manual spreadsheet

- The electronic spreadsheet utilizes the powerful aspects of the computer like speed; accuracy and efficiency to enable the user quickly accomplish tasks.
- The electronic spreadsheet offers a larger visual sheet for data entry and manipulation for example the largest paper ledger you can get is on that does not exceed 30 columns and 51 rows. While with a electronic spreadsheet the least ledger has at least 255 columns and 255 rows.
- The electronic spreadsheet utilizes the large storage space on computer storage devices to save and retrieve documents.
- The electronic spreadsheet enables the user to produce neat work because the traditional paper, pencil and rubber plus calculator are not put aside. All the work is edited on the screen and the final clear copy is printed and yet with a hand written spreadsheet, neatness depends on the writer's hand writing.

- Electronic spreadsheet has inbuilt formulas called functions that enable the user to quickly manipulate mathematical data

quickly manipulate mathematical data.

- Electronic spreadsheet automatically adjusts the result of the formula if the value in the worksheet is changed while for manual worksheet changing one vale means rubbing the result and writing the correct one again

Explain any five features of a spreadsheet application.

- **Insert text:** Allows you to insert text anywhere in the spreadsheet.
- **Delete text:** Allows you to erase characters, words, charts, or worksheets as easily as you can cross them out on paper.
- **Cut** and **Paste:** Allows you to remove (cut) a section of text from one place in a spreadsheet and insert (paste) it somewhere else.
- **Copy:** Allows you to duplicate a section of text.
- **Page layout:** Allows you to define various page sizes and margins.
- **Search and Replace:** Allows you to direct the spreadsheet to search for a particular word or phrase. You can also direct the spreadsheet application to replace one group of characters with another everywhere that the first group appears.
- **Headers, Footers, & Page Numbering:** Allows you to specify customized headers and footers that the spreadsheet file will put at the top and bottom of every worksheet. The spreadsheet automatically keeps track of page numbers so that the correct number appears on each page.
- **Merges:** Allows you to merge text from one file into another file. This is particularly useful for generating many files that have the same format but different data.
- **Spell Checker:** A utility that allows you to check the spelling of words in a spreadsheet file.
- **Print:** Allows you to send a spreadsheet file to a printer to get a hardcopy or many hardcopies as you would like.
- **Thesaurus:** A built-in thesaurus that allows you to search for synonyms (words with similar meaning) and antonyms ('opposites") without leaving the word processor.
- **Graphics**: The spreadsheet application permits the addition of various types of

  graphics, such as bar charts, line charts, clip art, and photographs.

Briefly explain five advantages of using Microsoft Excel.

- The ability to reuse the data as many times as required
- The ability to automatically recalculate the spreadsheet

- The ability to share the data from one application to another
- The ability to be able to apply different types of fonts and cell formatting to your spreadsheet
- The ability to be able to include drawing objects such as photos, lines, Excel art, cartoons, moving and text and even video
- The ability to spell check the whole spreadsheet in one go or at once
- The ability to add up and apply different formulas to your spreadsheet
- The ability to carry out What If scenarios in "real time"

State five examples of Electronic Spread Sheets software known to you

- Lotus 1-2-3

- Microsoft Excel

- VisiCalc

- Frame works

- Microsoft works

- Quattro-pro

- OpenOffice Calc

- Web based spreadsheets

- Apple Numbers

Name three Components of a spread sheet

- Worksheet:
- Database

- Graph

Components of Microsoft excel application windows

Title bar

It has the title of the application and control buttons for minimizing, maximizing and closing the application

Menu bar

It displays a list of menu options for example clicking one of them displays a menu that

has commands which can be selected in order to manipulate data in spreadsheet. The most common of these are the standard and formatting tool bar

The standard toolbar has shortcuts to some of the most commonly used menu commands like print, copy, paste, save etc.

The formatting toolbar has shortcuts to the commonly used commands found on the format menu options

Formula bar

This is the one of the most important components of the Microsoft excel application window. It enables the user enter or edit a formula or data in a cell.

If the formula bar is not available, click on view menu, then select formula bar.

Cellpointer

It makes the pointer of a current cell or insertion point. It is a special cursor rectangular in shape and makes the current cell appear as if it has dark boundaries.

Worksheet

This consist of cells organized into rows and columns. Data is entered her for manipulation and storage. Several worksheets can appear in one workbook

Worksheet labels

These are usually of the format, sheet 1/sheet2/ sheet3 e.t.c.

A workbook may have several sheets. It is possible to rename the sheets by right clicking on the labels then choosing rename command from the shortcut menu that

appears. The active sheet (one being used) has its label appearing darker in colour than the rest. To move to a particular sheet in the workbook simply click its sheet label

What is the difference between a cell and cell reference?

A cell is an intersection between a column and a row

Cell reference is a combination of the column letter and the row number

Name the three types of data that can be entered into a cell.
- Labels (text)
- Values (numbers)
- Formulae

What is a formula a term used in computer studies?

A formula is an instruction that tells the computer to work out the answer for the value entered.

Outline three types of formulae you know

- **Numeric Formulae**
- **Logical Formulae**
- **Text Formulae**

Define the following computer terminologies

    i. Range

       This group of adjacent cells; vertical or horizontal

    ii. Worksheet

       This is the biggest range because it consists of all the cells in a worksheet.

    iii. Work book

       This is the collection of various worksheets

    iv. Worksheet Frame

       This consists of columns ranging from A-IV…end and Rows ranging from

       1-16384…. end

    v. Worksheet tabs

       These indicate whether the file consist of more than one worksheet

    vi. Cell address

       The reference to particular cell

    vii. Range address

       The reference which has a format of top-left cell address: bottom-right cell address

    viii. label

       A label is a text entry

    ix. A Value

       A Value is a piece of data that can be used in calculations

    x. software

Set of instructions and programs that instruct the computer hardware on what to do.

xi. **Cell**

- Small box in an Excel worksheet.
- Intersection point of the row and column.
- Where a row meets with the column.

xii. **Worksheet**

- A single page of workbook or spreadsheet file.
- A single working area in a spreadsheet program, consisting of a grid of lettered columns and numbered rows.
- Is a grid of columns and rows

xiii. **Workbook**

- A file that contains a series of Worksheets

- A spreadsheet document that contains one or more worksheets.
- Collection of related spreadsheets that are saved as one file.

xiv. **Mixed Formula**

- Contains both absolute and relative arguments.

CELL REFERENCING/ADDRESSES

Cell reference identifies a cell or a range of cells on the worksheet and shows Microsoft excel where to look for the values or data needed to use in a formula

Types of cell addresses in excel

1. Relative Cell Address

When performing tasks that require cell referencing, one needs to use a formulae whose cell references keep on changing automatically depending on their position in the worksheet; this is called relative cell referencing

2. Absolute Cell Address

These are cell references that always refer tp cells in a specific location of the worksheet even if they are copied from cell one to another e.g d6. In this case both the column and the row are absolute

3. Mixed Cell Address

It is a cell reference that has either the row or column is made absolute, but not both, using the dollar sign.

A1 is relative.

$A1 is mixed.

A$1 is mixed.

A1 is absolute.