**25May, 2020 JESUS AND MARY SCHOOL AND COLLEGE MODULE 2**

**SUBJECT - COMPUTER**

**CLASS – 8**

**CHAPTER – FUNCTIONS IN EXCEL**

**Note: -** In this chapter, we will learn to use formulas and functions in Excel to perform calculations. But before that, let us try to understand the concept of ranges which plays a critical role in calculations.

**CELL RANGE**

Cell range is a group of contiguous cells, selected along with the active cell, forming a rectangular block of cells. The range can have few cells in it, whole row, column or the whole sheet. You can perform various operations on the cell range contents like copying, moving, deleting, applying cell formatting, etc.

Selecting a Range

* The active cell is always the selected cell.
* To select a range of cells using mouse, point your mouse pointer to the first cell in the range and drag the left mouse button until all the required cells are selected.
* To select a range of cells using keyboard, press the shift key and move to the lower last cell of the range using arrow keys.
* To select a complete column, just click on the column header of that column.
* To select a complete row, just click on the row header of that row.
* To select the entire worksheet, click on the cross-section of row and column heading.
* To deselect a cell range, click on any cell not included in the range.

**FORMULAS**

A formula in Excel is an expression made up of data values or the cell references of the cells containing data value, along with mathematical operators.

Elements of Formulas

A formula can consist of any of these elements-

* Mathematical operators, such as + (for addition) and \*(for multiplication) etc.
* Values or text.
* Cell references (including named cells and ranges).
* Worksheet functions (such as SUM or AVERAGE).

**TYPES OF REFERENCING**

The formula used in Excel are dynamic in nature. This means that the value of the result is recalculated automatically, if the values in any of the source cells are modified. This is achieved by using cell references in formulas instead of actual values.

Cell Referencing in formulas in Excel is of three types:

* Relative referencing
* Absolute referencing
* Mixed referencing

**Relative Referencing**

Relative Referencing is the default cell referencing used in Excel. In relative referencing, cell referencesof the cells containing the data, change when the formula is copied from one cell to another cell. This is especially useful when the same formula is to be entered in many cells and only the references of the cells containing the data values need to be changed.**e.g.=A1+C2**

**Absolute Referencing**

An absolute reference is a cell reference in a worksheet that remains constant even if the formula is copied or moved from one cell to another cell. A cell references is made absolute by putting a dollar sign before the column letter as well as the row number of the desired cell, such as **$E$2**. This reference is used when we want to refer to the same cell address in the formula copied to all cells.**e.g. =$E$2 + C2**

**Mixed Referencing**

Mixed Referencing is a combination of relative and absolute referencing. In mixed referencing, one part of the cell address­­—column or row, is made absolute while the other part is relative, such as **$A4 or A$4.** In mixed referencing, the cell references change in one direction – row or column, while the part made absolute remains same in the formula copied to all cells.**e.g. =B$2 + $C2**

**WORKSHEET 2**

**A. Fill in the blank.**

1. The default cell reference in a formula is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. An absolute cell reference has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_sign along with the column letter and row number in the cell.
3. A formula in Excel is an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ made up of data values or the cell references of the cells.
4. Every cell has a name known as its address which is made up of a\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ number.
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is when one part of the cell address is relative and the other is absolute.

**B. Write T for true or F for false.**

1. When you copy a formula with relative reference, the address of the cells in the formulas change according to the address of the destination cell. ( )
2. To select a complete column just click on the row header of that column. ( )
3. To deselect a cell range click on any cell not included in the range. ( )
4. Cell referencing refers to address of a cell or a range of a cells. ( )
5. To select a complete row just click on the row and column heading. ( )

**C. Short answers question.**

1. What is a range of cells?
2. Name the three types of cell references.
3. What do you mean by formula?
4. How do you select a range of cells using keyboard?
5. What is absolute referencing?

**Note:- Please do this work in yourcopies which will be checked when the school reopens . Please consider this important.**

Solutions to worksheet 1 uploaded on 11 may, 2020

**A. Short answers question.**

1. Is UNIX a single user operating system?

**Ans.** No, UNIX is a multi user operating system.

1. **What is real-time operating system?**

**Ans. A real-time operating system is a data-processing system in which there is a very short interval of time given for processing and responding to inputs.**

1. Write one example of GUI operating system besides Windows.

**Ans.**Apple's Mac OS is an example of GUI operating system beside Windows.

1. When was Windows 8 release for general?

**Ans.**Windows 8 was release in October 2012 for general.

1. What are the basic functions of an operating system? List any four of them.

**Ans.**The basic functions of an operating system are as follows:
 i) Input/output Management
 ii) File and folder management
 iii) Memory management
 iv) Control and co-ordinate hardware devices

**B.Objective Type Question:**

1. Both of these
2. Multitasking operating system
3. Single user OS
4. Main memory
5. Both of these

**C.True or False:**

1. **True**
2. **True**
3. **False**
4. **True**
5. **False**

**D.Fill in the blanks:**

1. System
2. Real-time
3. Linux, Windows10
4. CUI
5. GUI

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