INDIAN SCHOOL AL WADI AL KABIR

Class: IX	Department: Computer Science
WORKSHEET	INFORMATION TECHNOLOGY (402) Part B Unit 4 Electronic Spreadsheet

1 Marks Questions

1. What is the default name given to a newly created spreadsheet in LibreOffice Calc?

(a) Sheet 1 (b) Workbook 1 (c) Document 1 **(d) Untitled X (where X is a number)**

2. **What is the maximum number of rows available in a single LibreOffice Calc sheet?**
(a) 1,024 (b) 65,536 **(c) 1,048,576**

3. **What is the intersection of a row and a column called?**
(a) Range **(b) Cell** (c) Label (d) Formula

4. **Which character must all formulae in a spreadsheet begin with?**
(a) + (b) # **(c) =** (d) @

5. **What is the file extension for a spreadsheet saved in LibreOffice Calc?**
(a) .doc **(b) .ods** (c) .odt (d) .obj

6. **By default, labels (text) entered into a cell are aligned to the:**
(a) Left (b) Right (c) Center (d) Justified

7. **By default, values (numbers) entered into a cell are aligned to the:**
(a) Left **(b) Right** (c) Center (d) Top

8. **Which box in the formula toolbar displays the reference of the active cell?**
(a) Input line **(b) Name box** (c) Functions wizard (d) Status bar

9. **A block of adjacent cells in a worksheet that is highlighted is known as a:**
(a) Matrix (b) Active cell **(c) Range of cells** (d) Workbook

10. **What is the cell address of the very first cell in a worksheet?**
(a) 1A (b) 0A **(c) A1** (d) 11

11. **Which function is used to find the largest value in a range of cells?**
(a) SUM (b) AVERAGE **(c) MAX** (d) MIN

12. **Which mathematical operator is used for exponentiation (power) in Calc?**
(a) * (b) / **(c) ^** (d) #

13. **Which symbol is used to make a cell reference absolute (constant)?**
(a) & (b) % **(c) $** (d) #

14. **What is the keyboard shortcut to open the "Format Cells" dialog box?**
(a) Ctrl + F **(b) Ctrl + 1** (c) Ctrl + Shift + F (d) Alt + 1

15. **Which tool is used to automatically fill a series of numbers or days?**
(a) Auto-Format **(b) Fill handle** (c) Formula bar (d) Navigator

16. **Which type of chart is most suitable for comparing data as a percentage of a whole?**
(a) Column Chart (b) Line Chart **(c) Pie Chart** (d) Bar Chart

17. **What happens to a relative cell reference when it is copied to a new cell?**
(a) It changes rows and columns automatically. (b) It remains exactly the same. (c) It only changes the column letter. (d) It turns into a value.

18. **Which part of the formula toolbar allows you to edit the actual data or formula in a cell?**
(a) Name box (b) Sheet tab **(c) Input line** (d) Title bar

19. **How many columns does a LibreOffice Calc sheet have?**
(a) 256 **(b) 1,024** (c) 16,384 (d) 1,000,000

20. **Which referencing type is "*A*1" an example of?**
(a) Relative (b) Mixed **(c) Absolute** (d) Manual

Fill in the blanks

1. The column immediately next to column "Z" is _____**_AA1**_____.
2. The default extension of a workbook created using a LibreOffice Calc spreadsheet is _____**.ODS**___.
3. The spreadsheet feature used to continue the series is called as __**Fill Handle**_____**.**
4. The formula "=MIN(C1:C5)" stored in cell C6 when copied to cell D6 changes to **__=MIN(D1:D5)_____.**
5. The formula in cell A2 is =B2+C3. On copying this formula to cell C2, C2 will change to **__=D2+E3_____.**
6. The cell address of the cell formed by the intersection of the ninth column and the eighth row will be **__I8_____.**
7. $A1$B2 is an example of ___**MIXED**_____ referencing in spreadsheet software.
8. Numbers entered into a cell are automatically ___**RIGHT**_____aligned.
9. If A1:A5 contain the numbers 16, 10, 3, 25 and 6 then =Average(A1:A5;60) will display**___20_____.**
10. In _____**relative**_____ referencing, the reference changes rows and columns automatically when it is copied to a new cell.

Subjective Type questions

1. **Define a Cell and a Cell Address.**
   ◦ **Answer:** A **cell** is the intersection of a row and a column and is the basic element of a spreadsheet where data is held. A **cell address** is denoted by its column letter and row number (e.g., D4, E9).
2. **What is an Active Cell? How can you identify it?**
   ◦ **Answer:** An **active cell** is the currently selected cell that is ready to take data from the user. It is identified by a **thick border** and its address is displayed in the **Name box**.
3. **Differentiate between a Label and a Value.**
   ◦ **Answer:** A **label** is text data (letters, numbers, and symbols) that is left-aligned by default. A **value** refers to numerical data consisting only of numbers, which is right-aligned by default.
4. **Explain the use of the Fill Handle tool.**
   ◦ **Answer:** The **fill handle** is a small black square in the bottom-right corner of a selected cell used to automate repetitive tasks. It can be used to continue a predefined series (like days of the week) or to copy formulae to adjacent cells.
5. **Explain the purpose of the SUM and AVERAGE functions.**
   ◦ **Answer:** The **SUM** function adds all the values contained in a specified range of cells. The **AVERAGE** function finds the mathematical average (mean) of the values in a range.
6. **Describe the various parts of the Formula Toolbar in LibreOffice Calc.**
   ◦ **Answer:** The Formula Toolbar consists of:
      ▪ **Name box:** Shows the cell reference of the active cell.
      ▪ **Functions wizard:** Helps search for and select available functions.
      ▪ **Sum icon:** Used to quickly total the numbers in cells above.
      ▪ **Function icon:** Inserts an equals (=) sign into the cell to begin a formula.
      ▪ **Input line:** Displays and allows for editing of the active cell's contents (data, formula, or function).

7. **List and explain any four statistical functions available in Calc.**
   - **Answer:**
     1. **SUM:** Adds values in a cell range.
     2. **AVERAGE:** Calculates the average of values in a range.
     3. **MAX:** Identifies the largest value in a range.
     4. **MIN:** Identifies the smallest value in a range. *(Alternatively, **COUNT** can be used, which counts the number of cells containing numbers.)*

8. **Explain the advantages of using a spreadsheet for data analysis.**
   - **Answer:** Spreadsheet software like Calc is used for:
     - **Managing financial and accounting documents** and generating invoices.
     - **Performing complex calculations** accurately using built-in formulae and functions.
     - **Organizing data** through sorting (ascending/descending) and filtering.
     - **Data Visualization** by creating graphical representations (charts) for better decision-making.

9. **Describe the purpose of four different types of charts used in spreadsheets.**
   - **Answer:**
     1. **Column Chart:** Used for comparing classes of data items in groups.
     2. **Bar Chart:** Also used for group comparisons, represented horizontally.
     3. **Line Chart:** Best for comparing groups of data items over a sequence.
     4. **Pie Chart:** Specifically used to compare data items as a percentage of a whole

10. What is the default name of the worksheet? How can it be renamed?

Step 1: Open the LibreOffice Calc by using the standard process.

Step 2: Observe that the Calc has created the worksheets automatically with default name sheetx where x will be a number.. Give the specific name to the worksheet say 'newsheet'. To do this

- Select the menu **Sheet → Rename Sheet**.
- Give appropriate name, say **'new sheet'** to the worksheet and click **OK**. Notice the change in the worksheet name.

11. Write the steps to insert and delete the worksheet in Calc.

Insert: Right-click on the Sheet name (e.g. Sheet1, Sheet2 etc.) and choose the option "Insert Sheet". A new dialog would be opened, which contains various options for inserting a sheet.

Choose "Before Current Sheet" if you want the new sheet to be inserted before the Sheet where you right-clicked. Choose "After Current Sheet" if you want the new sheet to be inserted after the Sheet where you right-clicked. If you want to insert only one Sheet, provide "No of sheets:" = 1 and choose a name. If you want to insert multiple sheets, provide "No of sheets:" = any number you want. Those many number of sheets would be inserted with names in numeric order – sheet3, sheet4, sheet5.

Delete: To delete a sheet, right-click on the sheet which you want to delete. In the context menu, choose "Delete Sheet"

12. What is relative and absolute cell address in the spreadsheet?

(a) **Relative Referencing:** When you drag any formula in any row or column in any direction, the formula gets copied in the new cell with the relative reference. Almost all spreadsheet applications use relative referencing by default.

(b) **Absolute referencing:** In Absolute referencing, a $ symbol is used before the column name as well as row number to make it constant. For example, C12, D5, etc. In this case, even if you drag your formula in any direction, the cell name remains constant. This type of referencing is used in higher classes.

13. Explain any two operations performed on data in a spreadsheet.

Operator	Formula	Result
Addition (+)	= 23+ 6	29
Subtraction	0 – 6	- 6
Multiplication (*)	9*6	54
Division (/)	88/8	11
Exponentiation (^)	2 ^ 5	32

14. How do formulae work in a spreadsheet?

The main advantage of entering formula with cell addresses and operators, works just like a variable. When the values of the cells concerned change, the results obtained by the formula also get updated accordingly. Suppose to add the values in two cells A1 and A2 and get the addition in cell A3. If we position the cursor in cell A3 and simply add the values as =A1+A2, then we will get the correct addition in cell A3. If we change the values in cell A1 and A2 then we will get the respective addition with the change in values in cell A1 and A2.

15. Give the syntax and example of any three mathematical functions in spreadsheet.

Function	Syntax	Use
SUM	=SUM(Number1,Number2,.....)	Adds the values contained in a range of cells.
AVERAGE	=AVERAGE(Number1,Number2,....)	Finds out the average of the values contained in a range of cell
MAX	=MAX(Number1,Number2,.....)	Finds out the largest value contained in a range of cells.

Example:

=SUM (A1,B1,C1)	The sum of cells A1,B1 and C1
=SUM(A1:C1)	The sum of cells in the range of cells from A1 to C1
=SUM(A1:C1,B2)	The sum of cells in the range of cells from A1 to C1 and B2

16. Explain the advantages of drawing a chart in Calc.

There are certain advantages of using graphs or charts, particularly in Data Analysis. They are:

1) It makes the data more presentable and easy to understand. By looking at the chart itself one can draw certain inferences or analysis.

2) It helps in summarizing a very large data in a very crisp and easy manner.

3) It helps in better comparison of data

17. Write the steps to insert a chart in Calc.

Follow the steps given below to create charts.

- Select the range of data.
- ***Insert → Chart***
- Select the type of chart
- Select the chart (Column Chart)
- Click finish. A chart will be displayed.

18. Name and explain any five components of a chart in a spreadsheet package.

- Chart Area — Chart area includes all the area and objects in the chart.
- Category Axis — Category axis or X-axis is the horizontal axis of a chart.
- Value Axis — Value axis or Y-axis is the vertical axis used to plot the values. It is located at the left side.
- Data Series — Data series are the bars, slices or other elements that show the data values. If there are multiple data series in the chart, each will have a different colour or style.
- Category Name — Category names are the labels, which are displayed on the X and Y-axis.
- Plot Area — Plot area is a window within the Chart area. It contains the actual chart itself, and includes plotted data, data series, category, and value axis.
- Chart Title — It describes the aim and contents of the chart.

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