# Electronic Spreadsheet (Advanced)

▶ **Data Consolidation:** It allows you to gather together your data from separate worksheets into a master worksheet. In other words, the Data Consolidation function takes data from a series of worksheets and summaries it into a single worksheet.

▶ **Steps for Data Consolidation are:**

➤ Open the worksheet that contains the cell ranges to be Consolidated.

➤ Choose the Consolidate option under the Data menu.
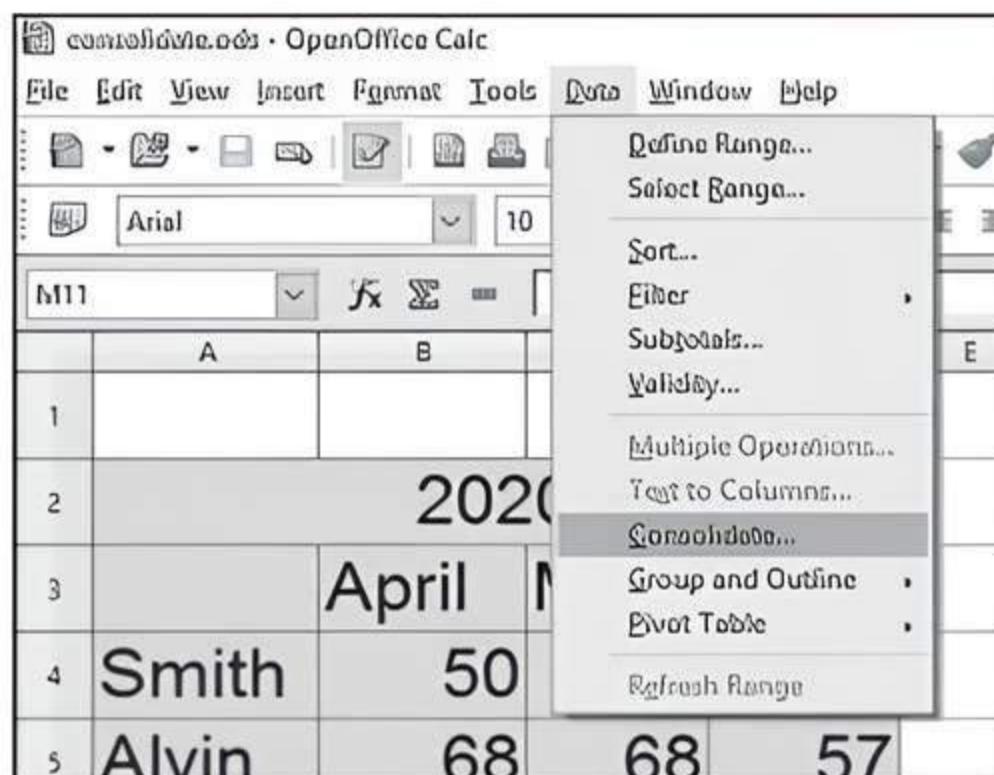
➤ Select source Data range and click Add. The selected range now appears on the Consolidation ranges list.

➤ Select additional ranges and click Add after each selection.

➤ Specify where you want to display the result by selecting a target range from the Copy results to box.

➤ Select a function from the Function list. The Sum function is the default setting.
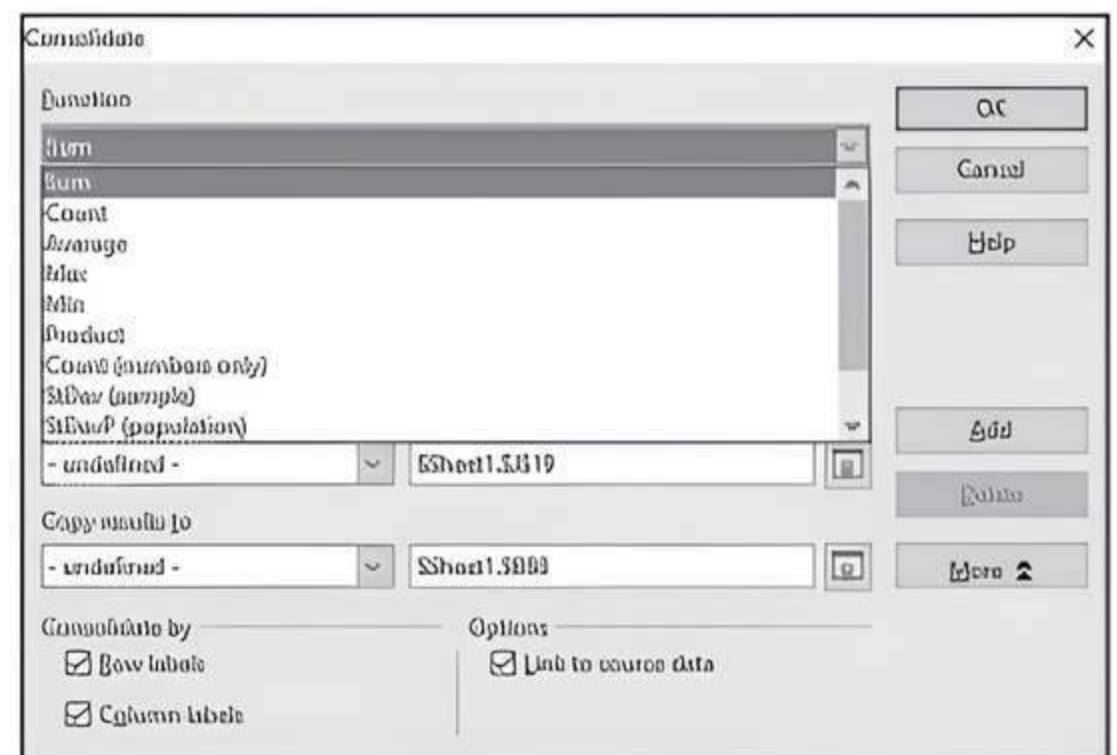
➤ Select either Row labels or Column labels. The text in the labels must be identical in all the specified source range.

➤ Click OK to Consolidate the ranges.

▶ **Creating Subtotals:** SUBTOTAL, totals/adds data arranged in an array—that is, a group of cells with labels for columns and/or rows. Using the Subtotals dialog, you can select arrays, and then choose a statistical function to apply to them. It is accessible from Data menu.

▶ **Steps to Insert Subtotal Values Into a Sheet:**

➤ Ensure that the columns have labels.

➤ In the Subtotals dialog, in the Group by box, select the column that you want to add the subtotals to.

➤ In the Calculate subtotals for box, select the columns that you want to subtotal.

➤ In the Use function box, select the function.

➤ Click OK.

▶ **Using "What IF" Scenarios:** Scenarios are a tool to test "what-if" questions. Each scenario is named, and can be edited and formatted separately. You can easily switch between different scenarios by using the Navigator. **For example**, if you wanted to calculate the effect of different interest rates on an investment, you could add a scenario for each interest rate, and quickly view the results.

▶ **Creating Scenarios:**

➤ Select the cells that contain the values that will change between scenarios.

➤ Choose **Tools > Scenarios.**

➤ On the Create Scenario dialog, enter a name for the new scenario. This name is displayed in the Navigator and on the title bar of the scenario.

- Optionally add some information to the Comment box.
- Optionally select or deselect the options in the Settings section.
- Click OK to close the dialog.

▸ **Goal Seek:** Usually, you run a formula to calculate a result based upon existing values. By contrast Goal Seek option under Tools menu, helps to find values which will produce the result that you want. **For example**, Chief Financial Officer has a good idea of the company's income in the first three quarters, because of the contracts that are already signed. For the fourth quarter, however, no definite income is available. So how much must the company earn in Q4 to reach its goal? Then Chief Financial Officer runs a goal seek on the empty cell for Q4 sales and receives the answer.

▸ **Solver:** Solver option under Tools menu amounts to a more elaborate form of Goal Seek. The difference is that the Solver deals with equations with multiple unknown variables. It is specifically designed to minimize or maximize the result according to a set of rules that you define.

▸ **Link Data and Spreadsheets Using Multiple Workbooks and Linking Cells:** Spreadsheet allows you to link the cells from various worksheets to summarize data from several sources. In this manner, you can create formulas using a combination of local and linked information. Multiple sheets help to keep the information organised.

▸ **Inserting New Sheets:** When you open a new spreadsheet, by default, it has a sheet named Sheet1. There are several ways to insert a new sheet. The first step, in all cases, is to select the sheet that will be next to the new sheet. Then do any of the following:
- Select **Insert > Sheet** from the menu bar, **or**
- **Right-click** on the tab and select Insert Sheet, **or**
- Click in an empty space at the end of the line of sheet tabs.

▸ "Each method opens the Insert Sheet dialog box where you can choose to put the new sheet before or after the selected sheet and how many sheets to insert."

▸ **Renaming Sheets:** There are three ways you can rename a worksheet. You can do any of the following:
- Double-click on one of the existing worksheet names.
- Right-click on an existing worksheet name, then choose Rename from the resulting Context menu.
- Select the worksheet you want to rename (click on the worksheet tab) and then select the Sheet option from the Format menu. This displays a submenu from which you should select the Rename option.

▸ **Cell Reference:** A cell reference refers to a cell or a range of cells on a worksheet that can be used in a formula to calculate values.

▸ **Referencing Other Sheets:** There are two ways to reference cells in other sheets :

- By entering the formula directly using the keyboard:
  - Typing the reference is simple once you know the format the reference takes. The reference has three parts to it: Path and file name, Sheet name, Cell name.
  - The general format for the reference is ◻'file:/// Path &File Name'#$SheetName.CellName
- By using the mouse.

▸ **Hyperlinks:** Hyperlinks can be used in Calc to jump to a different location from within a spreadsheet to other parts of the same file or to different files or even to websites. Hyperlinks can be stored within your file as either relative or absolute.

An absolute link will stop working only if the target is moved. A relative link will stop working only if the start and target locations change relative to each other. For instance, if you have two spreadsheets in the same folder linked to each other and you move the entire folder to a new location, a relative hyperlink will not break.

▸ **Insert and Modify Links Using the Hyperlink Dialog:** To display the dialog, click the **Hyperlink icon** on the **Standard toolbar** or **choose Insert > Hyperlink from the menu bar.**

▸ **Linking To External Data:** You can insert tables from HTML documents, and data located within named ranges from an **OpenOffice.org** Calc or Microsoft Excel spreadsheet, into a Calc spreadsheet you can do this in two ways: using the External Data dialog or using the Navigator.

▸ **Using the External Data Dialog:** Steps are:
- Open the Calc worksheet where the external data is to be inserted. This is the target worksheet.
- Select the cell where the upper left-hand cell of the external data is to be inserted.
- Choose **Insert –> Link to External Data.**
- On the External Data dialog, type the URL of the source worksheet.
- In the Available tables/range list, select the named ranges or tables you want to insert.
- Click OK to close this dialog and insert the linked data.

▸ **Linking to Registered Data Sources:** You can access a variety of databases and other data sources and link them into **Calc** worksheets. First you need to register the data source with **OpenOffice.org**. To register a data source that is in ***.odb** format:
- Choose Tools –> Options –> OpenOffice.org Base –> Databases.
- Click the New button to open the Create Database Link dialog.
- Enter the location of the database file, or click Browser to open a file browser and select the database file.
- Type a name to use as the registered name for the database and click OK.

▸ **Sharing Worksheet Data:** Spreadsheet software allows the user to share the workbook and place it in the network location where several users can access it simultaneously.

This is required to either speed up data entry or simply make things easier for collaboration purposes.

- **Setting up a Spreadsheet for Sharing:** Open the spreadsheet document, choose **Tools > Share Document** to activate the collaboration features for this worksheet. A dialog opens where you can choose to enable or disable sharing.
- To enable sharing, select the box at the top of the dialog, and then click **OK**. A message appears stating that you must save the worksheet to activate shared mode. Click **Yes** to continue. The word (shared) is then shown on the title bar after the worksheets title.
- **Saving a Shared Spreadsheet:** When you save a shared spreadsheet, one of several situations may occur:
  - ➤ If the worksheet was not modified and saved by another user since you opened it, the worksheet is saved.
  - ➤ If the worksheet was modified and saved by another user since you opened it, one of the following events will occur:
    - • If the changes do not conflict, the worksheet is saved, the dialog below appears, and any cells modified by the other user are shown with a red border.
    - • If the changes conflict, the Resolve Conflicts dialog is shown. You must decide for each conflict which version to keep, yours or the other person's. When all conflicts are resolved, the worksheet is saved.
    - • If another user is trying to save the shared worksheet and resolve conflicts, you see a message that the shared spreadsheet file is locked due to a merge-in progress.
- Most spreadsheets software automatically turns off some features in shared workbooks to simplify the workbook since multiple people can be working on the file at the same time. For example, shared workbooks don't allow merging cells, conditional formatting, or inserting pictures/graphs/etc.
- **Record Changes:** Calc has the feature to track what data was changed, when the change was made, who made the change and in which cell the change has occurred. **For example**, if you are the sponsor of a youth baseball team. The coach has submitted a budget to you and you are concerned that the coach won't see the changes you made, so you decided to use Calc with the record changes feature turned on, so that the coach can easily see the changes you have made.
  - **How to Turn on Record Changes Feature ON:**
    - ➤ Open the Shared Spreadsheet.
    - ➤ Select Edit > Changes > Record from the menu bar.
    - ➤ Begin editing the worksheet.
- A **red colored border**, with a dot in the upper left-hand corner, appears around a cell where changes were made.
- **Viewing Changes:** Calc allows you to control what changes you see when reviewing a worksheet. To change the available filters, select Edit > Changes > Show You can filter based on:
  - ➤ **Date:** Only changes made in a certain time range are displayed.

- ➤ **Author:** Only changes made by a specific author are displayed.
- ➤ **Range:** Only changes made in a specific range of cells are displayed.
- ➤ **Comment:** Searches the content of the comments and only displays changes which have comments.
- ➤ **Show Accepted Changes:** Only changes you accepted are displayed.
- ➤ **Show Rejected Changes:** Only changes you rejected are displayed.
- **Adding Comment to a Change:**
  - ➤ Make the change to the spreadsheet.
  - ➤ Select the cell with the change.
  - ➤ Choose Edit > Changes > Comments.
  - ➤ Type your own comment and click OK.
- **Editing Comment:**
  - ➤ Select the cell with the comment that you want to edit.
  - ➤ Select **Edit > Changes > Comments.**
  - ➤ Edit the comment and click OK.
- **Accepting or Rejecting Changes:** When you receive a worksheet back with changes. Now, as the original author, you can step through each change and decide which change to accept and which one to reject. To begin this process:
  - ➤ Open the edited worksheet.
  - ➤ Select **Edit > Changes > Accept or Reject.**
  - ➤ Calc steps through the changes one at a time. You can choose to accept or reject each change.
- **Merging Worksheets:** Sometimes, multiple reviewers return edited versions of a worksheet at the same time. In this case, Calc provides the feature of merging worksheets:
  - ➤ Open the original worksheet.
  - ➤ Select **Edit > Changes > Merge Document.**
  - ➤ A file selection dialog opens. Select a file you want to merge and click OK.
  - ➤ Accept or Reject Changes dialog opens and you can accept or reject the changes.
- **Comparing Documents:** When sharing worksheets reviewers may forget to record the changes they make. Calc can find the changes by comparing worksheets. In order to compare worksheets you need to have the original worksheet and the one that is edited. To compare them:
  - ➤ Open the edited worksheet that you want to compare.
  - ➤ Select **Edit > Compare Document.**
  - ➤ An open worksheet dialog appears. Select the original worksheet and click **Insert.**
  - ➤ Calc finds and marks the changes.
- **Macro:** A macro is a saved sequence of commands or keystrokes that are stored for later use. Macros are especially useful to repeat a task the same way over and over again.
- **Using the Macro Recorder:** Use **Tools > Macros > Record Macro** to start the macro recorder. The Record Macro dialog is displayed with a stop recording button. Click Stop Recording to stop the macro recorder.
- **Advantages of Using Macro in Calc:**
  - ➤ Macros automates the repetitive and routine tasks.
  - ➤ Macros speed up your process and reduce time.

Multiple Choice Questions ↘

Q 1. Which of the following type of package does Calc refer to?

a. Spreadsheet   b. Multi sheet

c. Double sheet   d. Cannot be determined

Q 2. Which of the following applications is not suitable for Calc?

a. Balance sheet preparation

b. Result analysis

c. Presenting an idea about a product

d. All of the above

Q 3. Which of the following is the extension of a worksheet created in Calc?

a. .ods   b. .odd   c. .xls   d. .obj

Q 4. Which of the following will be inserted in a worksheet if =starcalcteam() is inserted in a Calc cell?

a. Stars

b. Photograph of Calc developer team

c. Calc license information

d. Calc version information

Q 5. How can one calculate total of values entered in a worksheet in a Calc document?

a. By manual entry   b. By AutoSum

c. By formula   d. All of these

Q 6. If we move a cell containing a formula having reference to another cell in the worksheet, what will happen to the cell numbers used in formula?

a. The cell row and columns are changed at destination

b. The cell row numbers are changed at destination.

c. The cell column numbers are changed at destination

d. Nothing will be changed.

Q 7. Which option is uses to open Calc program?

a. Applications -> Office -> OpenOffice.org Spreadsheet

b. Applications -> OpenOffice -> OpenOffice.org Spreadsheet

c. Start -> Office -> OpenOffice.org Spreadsheet

d. Start -> OpenOffice -> OpenOffice.org Spreadsheet

Q 8. Which type of package is Calc?

a. Word processor   b. Spreadsheet

c. Database   d. Presentation

Q 9. In Calc, how many spreadsheets are there by default?

a. 2   b. 3   c. 4   d. 5

Q 10. How many worksheets are available in spreadsheet document?

a. 24   b. 64   c. 256   d. 65536

Q 11. How many menu are available in Calc?

a. 6   b. 7   c. 8   d. 9

Q 12. Which sign is available on bottom right side of the active cell?

a. +   b. #   c. −   d. ⬧

Q 13. How many rows are there in Calc?

a. 65516   b. 65526   c. 1 to 65536   d. 65546

Q 14. How many columns are there in Calc?

a. 226   b. 236   c. 246   d. 256

Q 15. Which is the basic element of a spreadsheet?

a. Cell   b. Worksheet

c. Workbook   d. Row and Column

Q 16. In which form scroll bar is seen in Calc?

a. Horizontal   b. Vertical

c. Both a. and b.   d. None of these

Q 17. Which background does current worksheet tab name have?

a. Black   b. White   c. Red   d. Green

Q 18. To add or remove toolbar, which option is used?

a. File -> Toolbars   b. Insert -> Toolbars

c. View -> Toolbars   d. Format -> Toolbars

Q 19. Which menu-option is sued to rename a worksheet?

a. Format -> Sheet -> Rename

b. Format -> Sheet -> Modify

c. Edit -> Sheet -> Rename

d. Edit -> Sheet -> Modify

Q 20. Which menu-option is used in Calc to add new worksheet?

a. File -> Sheet   b. View -> Sheet

c. Insert -> Sheet   d. Tools -> Sheet

Q 21. Which menu-option is used to save worksheet in Calc?

a. File -> Save   b. File -> Store

c. File -> Add   d. File -> Set

Q 22. Which symbol is used for multiplication in Calc?

a. &   b. ⁕   c. #   d. @

Q 23. Which symbol is necessary to write at the starting of formula?

a. =   b. #   c. @   d. *

Q 24. Which key is pressed to see the result after entering formula in Calc?

a. Insert key   b. Ctrl key

c. Enter key   d. Shift key

Q 25. To show cell range in Calc which symbol is used to separate the first cell address and the last cell address?

a. .   b. ,   c. :   d. ;

Q 26. Which of the following option is used to add the values between cell A1 to A5 in Calc?

a. = A1+A2+A3+A4+A5   b. = Sum(A1:A5)

c. Σ button   d. All of these

Q 27. A colored border, with ...., appears around a cell where changes are made in a shared worksheet.

[CBSE 2023]

a. a dot in the upper left-hand corner

b. a dot in the lower left-hand corner

c. a cross in the upper left hand corner

d. a cross in the upper right-hand corner

Q 28. In which form, the sum function appears in function bar?
   a. Σ   b. Δ   c. Ψ   d. ш

Q 29. On which bar Σ symbol does appear?
   a. Title bar   b. Formula bar
   c. Symbol bar   d. Format bar

Q 30. What is called to arrange data in order?
   a. Filtering   b. Inserting   c. Sorting   d. Deleting

Q 31. Arguments passed to a macro from Calc are always..........   *[CBSE SQP 2021, Term-1]*
   a. strings   b. numbers
   c. references   d. values

Q 32. .... function takes data from a series of worksheets or workbooks and summaries it into a single worksheet that you can update easily.
                                 [CBSE SQP 2021, Term-1]
   a. Summation   b. Data consolidation
   c. Data format   d. Data Chart

Q 33. If you are continually working with the same range, then you may give a name to the range using .... option under Data Menu.   *[CBSE SQP 2021, Term-1]*
   a. define data   b. define range
   c. define reference   d. define address

Q 34. In Calc, using the Subtotals dialog, you can select arrays and then choose a statistical function to apply to them. For efficiency, you can choose up to........... array to which to apply a function.
                                   [CBSE SQP 2021, Term-1]
   a. two   b. three   c. four   d. five

Q 35. Solve option under Tools menu amounts to a more elaborate form of .... The difference is that the Solver deals with equations with multiple ....
                                   [CBSE SQP 2021, Term-1]
   a. unknown variables, goals seek
   b. goals seek, unknown variables
   c. variables, equation
   d. subtotal, goal seek

Q 36. Usually, you run a formula to calculate a result based upon existing values. By contrast, using, you can discover what values will produce the result that you want?   *[CBSE SQP 2021, Term-1]*
   a. Subtotal   b. Sort Lists   c. Scenario   d. Goal Seek

Q 37. Rama and two of her friends are doing survey of gender wise employment rates of their locality as a school project using spreadsheet. They all want to work simultaneously to complete it on time. What option they should use to access the same Spreadsheet to speed up their work?
                                   [CBSE SQP 2021, Term-1]
   a. Consolidate Worksheet   b. Shared Worksheet
   c. Link Worksheet   d. Lock Worksheet

Q 38. A .... refers to a cell or a range of cells on a worksheet whose data values can be used in a formula.   *[CBSE 2023]*
   a. sheet   b. cell
   c. cell reference   d. cell data

Q 39. In Calc, to create the reference with the mouse:
                                   [CBSE SQP 2021, Term-1]
   a. Both Spreadsheets need not be open

b. Select the cell in which the formula is going to be entered
   c. There is no need of symbol
   d. Cell reference is not required

Q 40. Macros option is available in OpenOffice (OO) Calc, in which tab:
   a. Insert   b. Tools   c. Data   d. Format

Q 41. In Data Consolidate what are the operations we can perform ....
   a. sum   b. average
   c. max   d. All of these

Q 42. .... feature adds data arranged in a group of cell in Calc, with labels for columns and/or rows.
                                   [CBSE 2023]
   a. Average   b. Subtotal
   c. Goal seek   d. Solver

Q 43. .... feature of Calc is used to test 'what-if' questions.   *[CBSE 2023]*
   a. Solver   b. Goal seek
   c. Scenario   d. Styles

Q 44. .... feature of Calc helps to track what data was changed, when the change was made, who made the change and in which cell the change has occurred.   *[CBSE 2023]*
   a. Record Changes   b. Edit record
   c. Change record   d. Macro

Q 45. Goal Seek command is found in ....
   a. data   b. tools   c. format   d. edit

Q 46. Shortcut to Navigator is ....
   a. F10   b. F8   c. F6   d. F5

Q 47. The Record Macro option is present under .... menu.
   a. tools   b. data   c. format   d. insert

Q 48. Which tool you can use in Calc to make an estimate of output values for different input values?
   i. Multiple Operations   ii. Macros
  iii. Scenarios   iv. Goal Seek
   a. Only (i) and (iii)   b. Only (ii) and (iv)
   c. (i), (iii) and (iv)   d. All of these

Q 49. In spreadsheet, to apply Goal Seek your cell pointer must be in:
   a. the changing cell whose value you need to find.
   b. the result cell where formula is entered
   c. the cell where your targeted value is entered
   d. None of the above

Q 50. Which of the following tools deals with multiple unknown values?
   a. Goal Seek   b. Scenario
   c. Solver   d. Data Table

Q 51. In OO Calc, which option should be used to accept/reject the changes in the shared sheet?
   a. Edit->Accept
   b. Edit → Changes → Record
   c. Edit → Changes → Show
   d. Edit → Changes-Accept/Reject

Q 52. In a spreadsheet, absolute reference will be referred to:
   a. SAS4   b. SA4   c. AS4   d. A4

Q 53. Ramesh wants to solve one variable problem. Suggest him which of the data analysis tools is best suited for him?
a. Solver
b. Goal Seek
c. Scenario
d. Data Table

Q 54. Shovit wants to combine and find the sum/average of marks obtained by the students in the previous three periodic tests. The data is stored in various sheets of a workbook. Which of the following tools is best suited for him?
a. Data Range
b. Data Consolidation
c. Data Review
d. Data Merge

Q 55. Rakesh wants to apply a formula in the entire column of the spreadsheet, with respect to only one cell. What referencing he will use to get the correct result?
a. Relative Referencing
b. Absolute Referencing
c. Mixed Referencing
d. Hyperlink

Q 56. Which function cannot be performed through Subtotal in a spreadsheet? *[CBSE SQP 2021, Term-1]*
a. Sum
b. Product
c. Average
d. Percentage

Q 57. Scenarios are a tool to test .... questions.
a. auto
b. goal Seek
c. what-if
d. drop down

Q 58. It refers to a cell or a range of cells on a worksheet and can be used to find the values or data that you want formula to calculate. *[CBSE SQP 2021, Term-1]*
a. row
b. column
c. autosum
d. cell reference

Q 59. ...., totals/adds data arranged in an array—that is, a group of cells with labels for columns and/or rows, which step one must should follow before using the Subtotal option? *[CBSE SQP 2021, Term-1]*
a. Consolidate
b. Rename Data
c. Filter Data
d. Subtotal

Q 60. Which of the following is more elaborate form of Goal Seek? *[CBSE SQP 2021, Term-1]*
a. Subtotal
b. Scenario
c. Solver
d. Consolidate

Q 61. .... means combining data in a spreadsheet from different worksheets into master worksheet. *[CBSE SQP 2021, Term-1]*
a. Hyperlinks
b. Consolidating
c. Linking
d. Filter

Q 62. An .... link will stop working only if the target is moved while a .... link will stop working only if the start and target locations change relative to each other. *[CBSE SQP 2021, Term-1]*
a. absolute, fixed
b. relative, absolute
c. absolute, relative
d. permanent, absolute

Q 63. By default, sheets tab are present at the .... of the spreadsheet. *[CBSE SQP 2021, Term-1]*
a. top
b. bottom
c. center
d. right

Q 64. The cell reference in a spreadsheet for cell range B2 to F15 is .... *[CBSE SQP 2021, Term-1]*
a. B2.F15
b. B2;F15
c. B2:F15
d. B2-F15

Q 65. A .... hyperlink contains the full address of the destination file or web page. *[CBSE SQP 2021, Term-1]*
a. relative
b. absolute
c. mixed
d. address

Q 66. Macros are especially useful to .... the same way over and cover again. *[CBSE 2023]*
a. repeat a task
b. reject a task
c. report a task
d. comment a task

Q 67. Sunita is making a project in spreadsheets. Her friend has told her how to rename a spreadsheet as it will help her identify the worksheet data easily. She was very excited and told the same to her brother. Her brother told her that in spreadsheets (OpenOffice), a worksheet can be renamed using .... ways. *[CBSE SQP 2021, Term-1]*
a. 2
b. 3
c. 4
d. 1

Q 68. Raj has created a worksheet where he has added all the information of his employees. He wants every employee to go through the worksheet and update their address and phone number, if required. He also would like to know the changes done by his employees. Which feature of spreadsheet he should enable to see the changes made by his employees? *[CBSE SQP 2021, Term-1]*
a. Macro
b. Link Workbook
c. Change Worksheet
d. Track Changes

Q 69. Sravan wants to do the same set of tasks to be done repeatedly like formatting or applying a similar formula in a similar range of data. Suggest him a suitable tool for that.
a. goal seek
b. solver
c. scenario
d. macros

Q 70. What is the shortcut key for row hide?
a. Ctrl + 9
b. Ctrl + F9
c. Shift + F9
d. Ctrl + shift + 9

Q 71. .... can be used in Calc to jump to a different location from within a spreadsheet and can lead to other parts of the current file, to different files or even to websites. *[CBSE SQP 2021, Term-1]*
a. Tables
b. Auto Sum
c. Goal Seek
d. Hyperlinks

Q 72. Statement I: The data from the consolidation ranges and target range are saved when you save the worksheet.
Statement II: If you later open a worksheet in which consolidation has been defined, this data will not be available again.
Consider above two statements, identify the correct one. *[CBSE SQP 2021, Term-1]*
a. Statement I is wrong.
b. Statement II is wrong.
c. Both the Statements I and II are wrong.
d. Both the Statements I and II are correct.

Q 73. In Spreadsheets,

Statement I: To consolidate by row labels or column labels, the label must be contained in the selected sources ranges.

Statement II: The text in the labels must be identical so that rows or columns can be accurately matched.

Statement III: If the row or column label does not match any that exist in the target range, it will be appended as a new row or column.

Consider above two statements, identify the correct one. *[CBSE SQP 2021, Term-1]*
a. Only Statement I and II are correct.
b. Only Statement II is correct.
c. Only Statements II and III are correct.
d. All the Statements are correct.

Q 74. Rohan has ₹ 50,000 that he wants to invest in two mutual funds for one year. Fund A is a low risk fund with 18% interest rate and Fund B is a higher risk fund with 21% interest rate. Which feature of spreadsheets (Calc) will help him to decide?
a. Solver   b. Subtotal
c. Linking sheets d. Macros

Fill in the Blanks Type Questions

Q 75. An application that can be used to organised numerical data in the form table and perform calculations on it called a .... application.

Q 76. The .... is a fundamental element of a worksheet.

Q 77. A workbook is a collection of ....

Q 78. The .... cell format displays the content of cell in exponential notation.

Q 79. In OpenOffice Calc, the .... feature is used to fill a series of numbers such as 2,4,6,8 and so on.

Q 80. The .... displays the name of the active cell.

Q 81. .... contains the Name Box and the Input Line textbox.

Q 82. By default, in Calc, the numbers are aligned to the .... within a cell.

Assertion & Reason Type Questions

Directions (Q. Nos. 83-90): *In the questions given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the correct option.*
a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not correct explanation of Assertion (A).
c. Assertion (A) is true, but Reason (R) is false.
d. Assertion (A) is false, but Reason (R) is true.

Q 83. Assertion (A): Macro does not help in saving time in cases when a same set of tasks are to be done repeatedly.

Reason (R): Macros are stored in the same workbook in which they are created.

Q 84. Assertion (A): The variable cells are the cells that contain variable data that can be changed to achieve the objective.

Reason (R): We can refer to cell that are on other worksheets, in the same workbook, by prepending the name of the worksheet followed by a dollar sign ($) before the cell address.

Q 85. Assertion (A): A cell reference refers to a cell or a range of cells on a worksheet and can be used to find the values or data that we want to calculate.

Reason (R): The Subtotal option is present on the Reference tab.

Q 86. Assertion (A): The solver add-in is similar to Goal-seek, but it can accommodate more variables.

Reason (R): Count Function counts the cells that contains numbers.

Q 87. Assertion (A): A Scenario Manager can have multiple variables, but it can only accommodate up to 32 values.

Reason (R): We can add the Solver from the Data tab.

Q 88. Assertion (A): Subtotal creates a hierarchy of groups, known as an outline.

Reason (R): The last number displays both subtotals and individual values in the outline symbol.

Q 89. Assertion (A): Autosum automatically selects the values around the cells either rows or column.

Reason (R): The primary purpose of solver is simulation and optimisation of various business and engineering models.

Q 90. Assertion (A): The data consolidation function takes data from a series of worksheets or workbooks and summaries it into a single worksheet that can be updated easily.

Reason (R): The Sort option is present on the data tab.

Answers

1. (a)	2. (c)	3. (a)	4. (b)	5. (d)
6. (a)	7. (a)	8. (b)	9. (b)	10. (c)
11. (d)	12. (a)	13. (c)	14. (d)	15. (a)
16. (c)	17. (b)	18. (c)	19. (a)	20. (c)
21. (a)	22. (b)	23. (a)	24. (c)	25. (c)
26. (d)	27. (a)	28. (a)	29. (b)	30. (c)
31. (d)	32. (b)	33. (b)	34. (b)	35. (c)
36. (d)	37. (b)	38. (c)	39. (a)	40. (b)
41. (d)	42. (b)	43. (c)	44. (a)	45. (b)
46. (d)	47. (a)	48. (d)	49. (b)	50. (c)
51. (d)	52. (a)	53. (b)	54. (b)	55. (b)
56. (d)	57. (c)	58. (d)	59. (d)	60. (c)
61. (b)	62. (c)	63. (b)	64. (c)	65. (b)
66. (a)	67. (b)	68. (d)	69. (d)	70. (a)
71. (d)	72. (b)	73. (d)	74. (a)	

75. spreadsheet   76. cell
77. worksheet   78. scientific
79. autofill   80. name box
81. Formula Bar   82. right

83. (d)	84. (c)	85. (c)	86. (c)	87. (c)
88. (b)	89. (b)	90. (b)		

Case Study 1

What-If Scenario: It is the process of calculating backwards to find out an input by providing a specific output. It can be considered as the opposite to formulae. We use formulae to calculate an output by providing inputs, whereas What-If analysis helps us find out what input will result in a specific output. By using What-If Scenario tools, we can use several different sets of values in one or more formulae to explore all the various results. We can use What-If Scenario tools to estimate our monthly savings that meet our retirement goals, find the return rate of an investment, plan our budget and so on.

Q 1. Study the figure below. After doing her budget, Lucy realises that she cannot pay more than $3,850 per month (Monthly Payment) towards a new apartment. Which analytical function could she utilise to calculate her new loan amount based on the figure below?

	A	B	C	D
1				
2	APARTMENT LOAN			
3				
4	MONTHLY PAYMENT (PMT):			-5512.02
5	MONTHLY INTEREST RATE (RATE):			2.00%
6	MONTHS TO PAY OFF LOAN (NPER):			120
7	AMOUNT TO LOAN FROM BANK (PV):			250000

a. She could use the Solver function.
b. She could use the What-If Scenario function.
c. She could use the Goal Seek function.
d. She could use the Data Table function.

Q 2. Adam is searching for the Solver function, but cannot find it anywhere, not even under the Data tab on the Ribbon. Where could he find it?

a. Tools   b. Data   c. Format   d. Insert

Q 3. Study the figure below. After working out her budget, Casey realises that her expenses at $3,960 are far above her income of $2850. She wants to modify her budget by reducing all her non-essential budget items. Which analytical tool could she use to achieve this?

	A	B
1	CASEY'S MONTHLY BUDGET	
2	RENT	1100
3	GAS	250
4	POWER	85
5	WATER	27
6	CABLE	136
7	CAR INSTALLMENT	452
8	INSURANCE	98
9	GROCERIES	854
10	TOILETRIES	358
11	ENTERTAINMENT	150
12	CINEMA	90
13	EATING OUT/TAKE OUT	250
14	GYM/CLUB MEMBERHIP	110
15		3960

a. Goal Seek will allow her to change her total expenses by modifying all the cells she specifies which contain non-essential items.
b. Data tables will allow her to change all the amounts to fit in with her income.
c. She could use Solver to change her total expenses by modifying all the cells she specifies which contain non-essential items.
d. She could use the PMT function to calculate her monthly budget payments and exclude non-essential items.

Q 4. Study the figure below. Continuing from Casey's budget pictured above question 3, what number should be entered in the Value Of: box figure below?
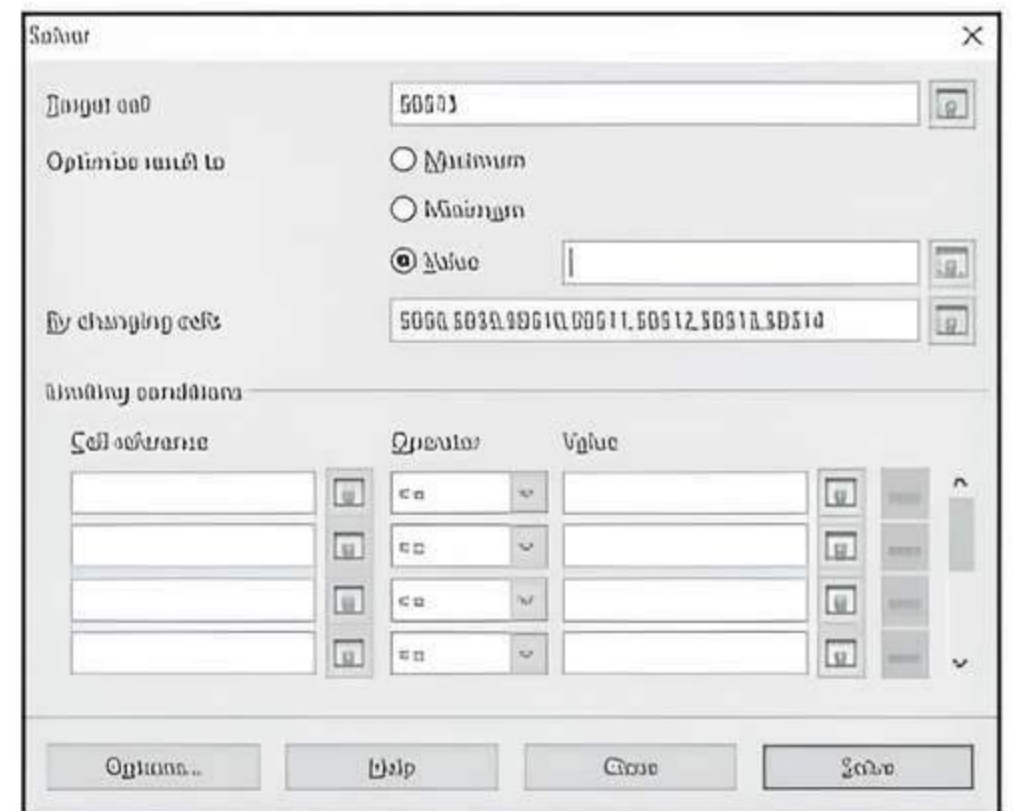
a. 3960   b. 10
c. 2850   d. 1

Q 5. When you use Solver, there are several Solving method options you can choose from, depending on your calculation needs. Which of the following is NOT an available Solving Method?

a. Assume variable as integer
b. Sum-Product
c. Assume variable as non-negative
d. Limit branch – and - bound depth

Answers

1. (c)   2. (a)   3. (c)   4. (c)   5. (b)

Case Study 2

Cell Reference: A cell reference in Calc refers to the value of a different cell or cell range on the current worksheet or a different worksheet within the spreadsheet. A cell reference can be used as a variable in a formula. The simplest cell reference appears as a simple mention of the referred cell after an equal sign. For example (=C5) refers to the value within cell C5. It means that the value of the current cell is equal to the value of C5.The

objective and constraint cells. Solver adjusts the values in the decision variable cells to satisfy the limits on constraint cells and produce the result you want for the objective cell.

Q 1. What is GoalSeek?

Q 2. Which option displays a cell address in GoalSeek dialog box?

Q 3. What is the use of solver?

Q 4. How to open solver dialog box.

Q 5. In solver dialog box which option indicates the formula cell?

Answers

1. A GoalSeek feature provides a target based result and informs the user about the changes in value in the applied formula.
2. A Formula Cell option displays a cell address in GoalSeek dialog box.
3. Solver feature of OpenOffice Calc deals with formulas with multiple unknown value.
4. Click on Tools → Solver
5. Target Cell in solver dialog box option indicates the formula cell.

Very Short Answer Type Questions

Q 1. Define OpenOffice Calc.

Ans. Calc is the spreadsheet component of OpenOffice. org (OOo). We can enter data (usually numerical) in a spreadsheet and then manipulate this data to produce certain results.

Q 2. What do you mean by spreadsheet?

Ans. An electronic spreadsheet is an excel sheet made up of rows and columns, used for calculations.

Q 3. What is consolidate data?

Ans. Consolidate means that to combine a number of things into a single unit. Consolidating of data means that the process of combining the number of data organised into different sheets into one worksheet or cell.

Q 4. What is the use of Link to source data?

Ans. The Link to source data option is used to update the value in consolidated worksheet formula cell automatically when the user changes data in source cell.

Q 5. What is the role of function option in consolidate dialog box?

Ans. The function option in consolidate dialog box allows to select the function in the destination cells. This is the first thing that has been done by the user in the consolidating data process.

Q 6. What is the consolidation ranges list?

Ans. The consolidation ranges list displays the list of selected ranges from where the input is coming. It is the ranges of other sheets or input values. It is displayed like this: $Sheet1.$A$S6.

Q 7. What do you mean by Subtotal?

Ans. Subtotal is the sum of a set of numbers, which is then added to another set of numbers to make the grand total.

Q 8. Explain Var function.

Ans. Var function estimates the variance of a population on the basis of a sample of numbers.

Q 9. Define Varp function.

Ans. Varp function estimates the variance of a population on the basis of an entire population of numbers.

Q 10. Define the following:
(i) Average function   (ii) Count function

Ans. (i) **Average function**: It calculates the average of numbers.
(ii) **Count function**: It counts non-empty cells.

Q 11. How Count Numbers function is different from the Count function?

Ans. Count Numbers function counts the cell that contain numbers while the Count function counts non-empty cells.

Q 12. Explain the term outline.

Ans. Subtotal creates a hierarchy of groups, known as outline, which lets us display or hide the details for each subtotal or view just a summary of the subtotals and ground totals.

Q 13. What is What-If Scenario?

Ans. What-If Scenario is the process of calculating backwards to find out an input by providing a specific output. It can be considered to be the opposite to formulae.

Q 14. What do you mean by Solver?

Ans. Solver belongs to a special set of commands of What - if Analysis tools. It's primarily purpose is simulation and optimisation of various business and engineering models.

Q 15. Define Objective cell.

Ans. The Objective cell is the cell containing a formula that represents the objective, or goal, of the problem. The objective can be to maximise, minimise or achieve some target value.

Q 16. What is the use of What-if Scenario? How to modify existing scenarios?

Ans. A **What-if Scenario function** provides a tool to test and quickly change the arguments of formula and view the new results. We can use **navigator** to modify existing scenarios.

Q 17. What is Trace Dependents?

Ans. The Trace Dependents option displays the arrow points to the cells directly dependent on the current cell.

c. Click in an empty space at the end of the line of sheet tabs.

d. All of the methods listed above are ways of inserting new sheets into a workbook.

Q 3. Study the screenshot below. How would you go about deleting the worksheet above named Address?

28	RENT	1100
29	GAS	250
30	POWER	85
31	WATER	27

◀◀ ◀ ▶ ▶▶ / Sheet2 / Sheet3 \ **Address** / Sheet5

Sheet 4 / 5

a. Right-click the worksheet tab named Address and select Delete sheet from the menu list.

b. Left-click the worksheet tab named Address and press Delete on your keyboard.

c. Left-click and drag the worksheet tab named Address out of the Excel window to delete it.

d. All of the options listed above are valid methods for deleting a worksheet in Excel.

Q 4. How do you change the colour of worksheet tabs?

a. It is not possible to change the color of worksheet tabs.

b. Select the worksheet tab by left-clicking it and then select a border shading colour from the Font group under the Home tab.

c. Right-click the worksheet tab, go to Tab Color on the menu list and select a colour.

d. Use the Format Painter in the Clipboard group under the Home tab to apply colour to worksheet tabs.

Q 5. Study the screenshot below. Which of the formulas listed below do you think will accurately SUM the totals from the January, February, March worksheets above for each employee when inserted into the selected cell in the Salary Totals worksheet?

25		AYUSH	20000
26		DEEPAK	24000
27		JOHN	15000
28		ROHIT	35000
29		ANKUR	34000
30		GAURAV	27000
31			

◀ ◀ ▶ ▶ \ JANUARY / FEBRUARY / MARCH \ TOTAL SALARY

Sheet 4 / 4

a. The formula: =SUM(JANUARY!C27, FEBRUARY!C27, MARCH!C27) will calculate across all three worksheets.

b. The formula: =SUM(JANUARY:C27, FEBRUARY:C27, MARCH:C27) will calculate across all three worksheets.

c. The formula: SUM(JANUARY.C27:FEBRUARY.C27:MARCH.C27) will calculate across all three worksheets.

d. The formula: =SUM(JANUARY, FEBRUARY, MARCH) will calculate across all three worksheets.

Answers

1. (c) **2.** (d) **3.** (a) **4.** (c) **5.** (c)
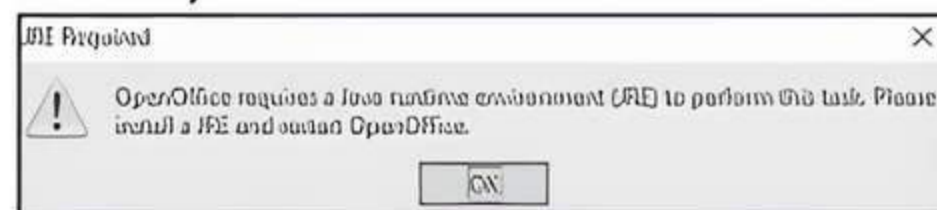
Case Study 4

Running a Macro: A macro, in the context of computer science, is short for macroinstruction which is a set of instructions combined into a single action that can be repeatedly executed. Macros may seem very intimidating at first glance, but by working through this tutorial and practicing in Microsoft Excel, you will be a pro in no time.

Macros are code that automate work in a program—they let you add your own tiny features and enhancements to help you accomplish exactly what you need to do, quickly with just a click of a button. In a spreadsheet tool like Calc, macros can be especially powerful. Hidden behind the normal user interface, they are more powerful than standard functions you enter into a cell (e.g. =IF(A2<100,100,A2)).

Q 1. Which of the descriptions listed below best describes what a macro in Excel does?

a. It is a type of formatting you can apply to enlarge the worksheet area.

b. It is a file type that you save a workbook as.

c. It is a series of instructions contained in one command that you can use to automate complex and/or repetitive tasks.

d. It is a recording function that allows you to save worksheets, audio recordings and videos that are displayed on the screen.

Q 2. Study the screenshot below. What is the appropriate action to take when a workbook displays this message (JRE required to perform this task)?

JRE Required ✕

⚠ OpenOffice requires a Java runtime environment (JRE) to perform this task. Please install a JRE and restart OpenOffice.

[OK]

a. Close it immediately and delete the file.

b. Check where the file originates from, and if it is a trusted source or your own workbook, click ok.

c. Close the file then right-click and rename it before opening it again.

d. None of the options listed above are correct.

Q 3. Why Java Runtime Environment (JRE) is required to perform the task?

  a. JRE. is a software layer that runs on top of a computer's operating system software and provides the class libraries and other resources that a specific Java program needs to run.

  b. Java is required for complete OpenOffice functionality. Java is mainly required for the HSQLDB database engine (used by our database product Base) and to make use of accessibility and assistive technologies.

  c. Both a. and b.

  d. None of the above

Q 4. Study the screenshot below. Where will you find the option to launch the Macro Selector dialog?
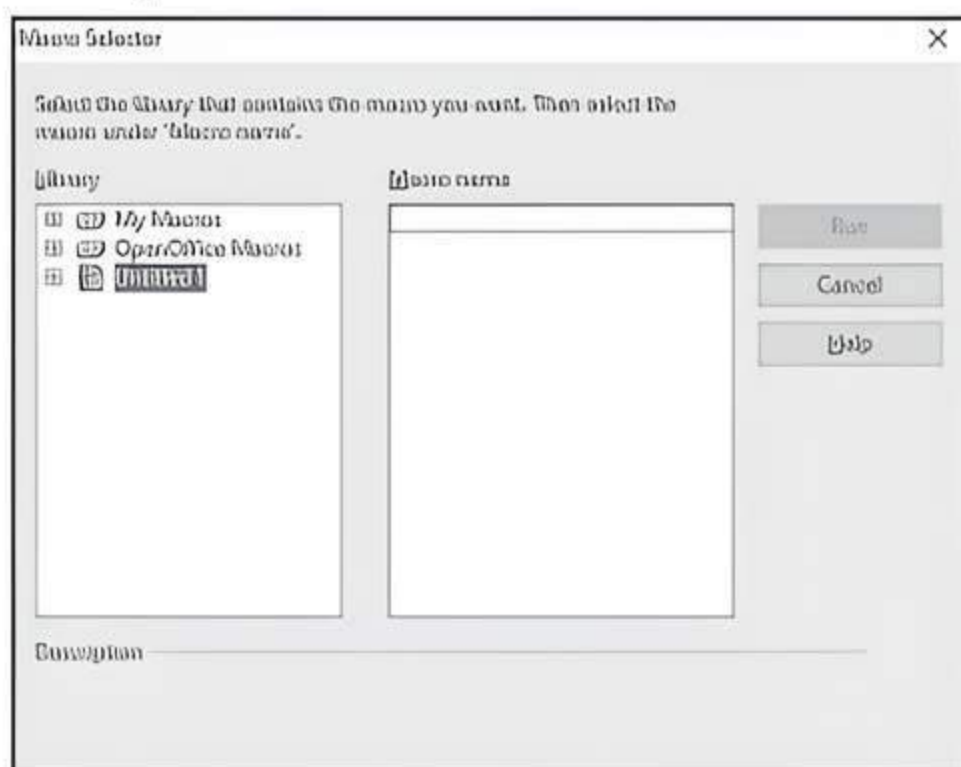
  a. Use Data > Macros > Run Macro to open the Macro Selector dialog

  b. Use Insert > Macros > Run Macro to open the Macro Selector dialog

  c. Use Tools > Macros > Run Macro to open the Macro Selector dialog

  d. Use Format > Macros > Run Macro to open the Macro Selector dialog

Q 5. In Openoffice.org Calc, macro is saved in ....

  a. Worksheet > Library > Module

  b. Worksheet > Module

  c. Worksheet > Module > Library

  d. None of the above

Answers

1. (c)   2. (b)   3. (c)   4. (c)   5. (a)

Case Study 5

Data consolidation is the corralling, combining, and storing of varied data in a single place. It lets users manipulate different types of data from one point of access and helps turn raw data into insights that drive better, faster decision-making. The term sometimes is used interchangeably with data integration.

Data consolidation enables businesses to streamline their data resources, discover patterns, and look for insights in multiple types of data. Data consolidation refers to the collection and integration of data from multiple sources into a single destination. During this process, different data sources are put together, or consolidated, into a single data store.

Because data comes from a broad range of sources, consolidation allows organisations to more easily present data, while also facilitating effective data analysis. Data consolidation techniques reduce inefficiencies, like data duplication, costs related to reliance on multiple databases and multiple data management points.

Q 1. What is the use of consolidate feature?

Q 2. How to use row labels and column labels options?

Q 3. How to open a consolidated dialog box in OO Calc?

Q 4. How to create a range in OpenOffice Calc?

Q 5. Name the button which is used to define a range after typing name?

Answers

1. The consolidate feature provides the contents of one cell from more than one sheet that can be combined in one place.

2. The row labels and column labels options will only available when you click on Consolidate by button.

3. Click on Data → Consolidate option.

4. Insert → Names → Define

5. Add button is used to define a range after typing name.

Case Study 6

The Goal Seek Excel function (often referred to as What-if-Analysis) is a method of solving for a desired output by changing an assumption that drives it. The function essentially uses a trial and error approach to back-solving the problem by plugging in guesses until it arrives at the answer. For example, if the formula for revenue is equal to the number of units sold multiplied by the selling price, Goal Seek can determine how many units have to be sold to reach $1 million of revenue, if the selling price is known. The function is extremely useful for performing sensitivity analysis in financial modeling.

Use Solver to find an optimal (maximum or minimum) value for a formula in one cell — called the objective cell — subject to constraints, or limits, on the values of other formula cells on a worksheet. Solver works with a group of cells, called decision variables or simply variable cells that are used in computing the formulas in the

Q 18. Define Multiple Operations tool.

Ans. A Multiple Operations tool is used to create a formula array in OpenOffice (OO) Calc.

Q 19. How many arguments can be altered in GoalSeek?

Ans. One arguments can be altered in GoalSeek.

Q 20. Which option is used to type a resultant value to achieve the goal?

Ans. Target Value option is used to type a resultant value to achieve the goal.

Q 21. What is the use of variable cell?

Ans. The variable cell option allows to select a cell to display or set the result value in a GoalSeek dialog box.

Q 22. What option appears when we click on OK button in GoalSeek dialog box in OpenOffice Calc?

Ans. GoalSeek Successful Message box option will appear when we click on OK button in GoalSeek dialog box in OpenOffice Calc.

Q 23. What is the more elaborate form of GoalSeek?

Ans. Solver is the more elaborate form of GoalSeek.

Q 24. What is the advantage of sharing worksheet data?

Ans. The advantages of sharing worksheet data are as follows:

   (i) Speed up data entry.

   (ii) Make things easier for collaboration purposes.

Q 25. What is the purpose of adding comments?

Ans. Comments helps reviewer to see or add the changes done on the worksheet.

Q 26. How can we add comments to the changes made?

Ans. Edit → Changes → Comments

Q 27. Why do we need to merge worksheets? *[CBSE 2023]*

Ans. Sometimes, multiple reviewers return edited versions of a worksheet at the same time. In this case, it may be quicker to review all of these changes at once, rather than one review at a time. For this purpose, we need to merge worksheets.

Q 28. What are Macros?

Ans. A Macro is a saved sequence of commands or keystrokes that are stored for later use.

Short Answer Type Questions

Q 1. What are the features provided by Calc?

Ans. The various features provided by Calc are as follows:

   (i) Functions, which can be used to create formulas to perform complex calculations on data.

   (ii) Database functions, to arrange, store, and filter data.

   (iii) Dynamic charts; two new types of charts—Bubble Charts and Filled Net Charts—have been introduced in OpenOffice.org(OOo) 3.2.

   (iv) Macros, for recording and executing repetitive tasks; scripting languages supported include OpenOffice.org Basic, Python, BeanShell, and JavaScript.

   (v) Ability to open, edit, and save Microsoft Excel spreadsheets.

   (vi) Import and export of spreadsheets in multiple formats, including HTML, CSV, PDF, and PostScript.

Q 2. Write steps to use consolidating data in OpenOffice Calc.

Ans. Steps to Consolidating Data in OpenOffice Calc: Prepare your worksheets for data consolidation and follow these steps:

   (i) Click on Data → Consolidate option. A consolidate dialog box will appear.

   (ii) The dialog is almost similar like MS Excel Select your desired function and add references to the cells by selecting ranges.

   (iii) Click on more button to add row labels and column labels or to link source data.

Q 3. How to add input value cells without creating ranges for data consolidation?

Ans. To add input value cells without creating ranges for data consolidation follow the steps:

Step 1: Click on the source data range option.

Step 2: Click on the shrink button.

Step 3: Move to the source worksheet and select the cell.

Step 4: Now again click on the shrink button.

Step 5: Click on the Add button.

Q 4. Write the options available in the Consolidate dialog box.

Ans. The following options are available in consolidating the dialog box.

   (i) Function

   (ii) Consolidate Ranges

   (iii) Select data range

   (iv) Copy results to

   (v) Labels

   (vi) Link to source data

   (vii) Button – OK, Cancel Help, Add, Delete, More

Q 5. What is subtotals in OpenOffice Calc?

Ans. Spreadsheet software provides powerful features to analyse your data. There are some advanced features that can help to perform some advanced functions on the formula results. Subtotal is one of them. Subtotal is used to display your formula results according to columns group and row labels. There are two methods to achieve the same thing in spreadsheet software.

Subtotal() Formula: The subtotal() formula to group the results.

Data → Subtotals Command: The graphical command to do subtotals.

Q 6. How can we rename a worksheet in Spreadsheet?

Ans. There are three ways you can rename a worksheet, and the only difference between them is the way in which you start the renaming process. You can do any of the following:

(i) Double-click on one of the existing worksheet names.

(ii) Right-click on an existing worksheet name, then choose Rename from the resulting Context menu.

(iii) Select the worksheet you want to rename (click on the worksheet tab) and then select the Sheet option from the Format menu. This displays a submenu from which you should select the Rename option.

Q 7. Explain the 1st group tab in short.

Ans. The 1st group tab in the first tab of the subtotals dialog box. It provides 3 options:

(i) **Group By:** This option provides on the drop-down list of column headers used in the worksheet. Select the column name which you want to display in the subtotals group.

(ii) **Calculate Subtotals for:** It is used to select the value to display the result in a group.

(iii) **Use Functions:** This option is used to select different functions like sum, count, max, min, etc.

Q 8. Define What If scenario with example.

Ans. The "What If" scenario feature allows us to create different target-based "What If" analysis. Suppose we are playing a cricket tournament where we need to analyse our team performance on the net run rate we can use "What If" scenarios. Moreover, it can help in every match to achieve the target in different conditions.

These different conditions means:

(i) How many runs are required in how many overs to qualify on top of the point table?

(ii) How many runs need to be saved to climb up in the point table? etc.

We can create scenarios with different names and targets. These scenarios you can view any time from the scenarios manager.

Q 9. Distinguish between the following with respect to spreadsheets: [CBSE 2023]

(i) **Relative and Absolute hyperlink.**

(ii) **Internet hyperlink and Document hyperlink.**

Ans. (i)

	Relative Hyperlink	Absolute Hyperlink
(a)	A relative hyperlink is a hyperlink that contains an address that is relative to the address of the destination file.	An absolute hyperlink is a hyperlink that contains the full address of the destination file or of the website.
(b)	It doesn't work if the start and target locations change relative to each other.	It doesn't work if the target is moved.

(ii)

	Internet Hyperlink	Document Hyperlink
(a)	Internet hyperlink connect content across the global network of the world wide web.	Document hyperlinks are used to connect content within a specific document or on a local network.
(b)	For an internet hyperlink, choose the type of hyperlink either web, FTP or Telnet and enter the required web address (URL).	For a document hyperlink, specify the worksheet path or leave this blank if you want to link to a target in the same spreadsheet.

Q 10. Explain features and use of Record changes.

Ans. Calc has the feature to track what data was changed when the change was made, who made the change, and in which cell the change has occurred. A colored border, with a dot in the upper left-hand corner, appears around a cell where changes were made. Other reviewers then quickly know which cells were edited. A deleted column or row is marked by a heavy-colored bar.

Example: If you are the sponsor of a youth baseball team, the coach has submitted a budget to you for the season and you need to edit the costs and return them to her. You are concerned that if you just make the changes, then the coach won't see the changes you made. You decide to use Calc with the record changes feature turned on so that the coach can easily see the changes you have made.

Q 11. What is the purpose of adding comments? How can we add comments to the changes made?

Ans. Reviewers and authors can add their comments to explain their changes.

To add a comment to a change:

(i) Make the change to the spreadsheet.

(ii) Select the cell with the change.

(iii) Choose Edit > Changes > Comments. The dialog shown below appears. The automatically-added comment provided by Calc appears in the title bar of this dialog and cannot be edited.

(iv) Type your own comment and click OK.

Q 12. Explain the feature of accepting or reject changes.

Ans. When you receive a worksheet back with changes, the beauty of the recording changes system

becomes evident. Now, as the original author, you can step through each change and decide how to proceed. To begin this process:

(i) Open the edited worksheet.

(ii) Select Edit > Changes > Accept or Reject. The dialog shown below opens.

(iii) Calc steps through the changes one at a time. You can choose to accept or reject each change as you go through it.

OR

You can also select Accept all and reject all if you want to do so.

💡 Long Answer Type Questions ⭘

Q 1. **Define a range for consolidate data in OpenOffice Calc.**

Ans. This option is useful for consolidate data in OpenOffice Calc. So follow these steps to define a range in OpenOffice Calc:

(i) Select the cells for which you want to create a range.

(ii) Click on Insert → Names → Define or press Ctrl + F3. A Define Names Dialog box will appear on the screen.

(iii) Type the range in the Name box. Do not use space in range names.

(iv) The Add button will active click on that.

(v) Click on OK.

Q 2. **Write all the steps for creating scenarios.**

Ans. To create a scenario, select all the cells that provide the data for the scenario.

(i) Select the cells that contain the values that will change between scenarios. To select multiple cells, hold down the Ctrl key as you click each cell.

(ii) Choose **Tools > Scenarios.**

(iii) On the Create Scenario dialog, enter a name for the new scenario. It's best to use a name that clearly identifies the scenario, not the default name as shown in the illustration. This name is displayed in the Navigator and on the title bar of the scenario on the sheet itself.

(iv) Optionally add some information to the **Comment** box. The example shows the default comment. This information is displayed in the Navigator when you click the Scenarios icon and select the desired scenario.

(v) Optionally select or deselect the options in the Settings section. See below for more information about these options.

(vi) Click **OK** to close the dialog. The new scenario is automatically activated.

Q 3. **What is merging worksheet feature in OpenOffice Calc?**

Ans. **Merging Worksheets:** Sometimes, multiple reviewers return edited versions of a worksheet at the same time. In this case, it may be quicker to review all of these changes at once, rather than one review at a time. For this purpose, Calc provides the feature of merging worksheets.

To merge worksheets, all of the edited worksheets need to have recorded changes in them.

(i) Open the original worksheet.

(ii) Select **Edit > Changes > Merge Document.**

(iii) A file selection dialog opens. Select a file you want to merge and click **OK**.

(iv) After the worksheets merge, the Accept or Reject Changes dialog opens. If you want to merge more worksheets, close the dialog and then repeat steps 2 and 3. Now all of the changes are combined into one worksheet and you can accept or reject the changes. Changes from different authors appear in different colors in the worksheet.

Q 4. **What is meant by Viewing Changes feature in OpenOffice Calc?**

Ans. Calc gives us tremendous control over what changes we see when reviewing a worksheet. To change the available filters, select **Edit > Changes > Show.** Using the different settings, you can control which changes appear on screen. You can filter based on:

(i) Date – Only changes made in a certain time range are displayed.

(ii) Author – Only changes made by a specific author are displayed. This is especially useful if you have multiple reviewers on the worksheet.

(iii) Range – Only changes made in a specific range of cells are displayed. This is especially useful if you have a large spreadsheet and only want to review a part of it.

(iv) Comment: Searches the content of the comments and only displays changes which have comments that match the search criteria.

(v) Show accepted changes: Only changes you accepted are displayed.

(vi) Show rejected changes: Only changes you rejected are displayed.

Q 5. **Explain the options tab of the subtotals dialog box in short.**

Ans. The options tab of the subtotals dialog box has mainly two options:

(i) Groups   (ii) Sort

(a) **The group's options** are applicable to the group and provide the following options:

• **Page break between groups:** Display each group on different pages.

• **Case sensitive:** Check the case sensitive data i.e. matches upper and lower case text.

• **Pre-sort area according to groups:** It will sort the data according to results.

(b) The sort group option provides sorting options like ascending or descending order and custom sort order according to users.

Q 6. Discuss Comparing documents in OpenOffice Calc.

Ans. Comparing Documents: When sharing worksheets reviewers may forget to record the changes they make. This is not a problem with Calc because Calc can find the changes by comparing worksheets.

In order to compare worksheets you need to have the original worksheet and the one that is edited. To compare them:

(i) Open the edited worksheet that you want to compare with the original worksheet.

(ii) Select Edit > Compare Document.

(iii) An open worksheet dialog appears. Select the original worksheet and click **Insert**.

Calc finds and marks the changes as follows:

(i) All data that occurs in the edited worksheet but not in the original is identified as inserted.

(ii) All data that is in your original worksheet but is not in the edited worksheet is identified as deleted.

(iii) All data that is changed, is marked as changed.

Q 7. What are Macros? How can we record a Macro?

Ans. A macro is a saved sequence of commands or keystrokes that are stored for later use. An example of a simple macro is one that 'types' your address. The OpenOffice.org (OOo) macro language is very flexible, allowing automation of both simple and complex tasks.

Using the Macro Recorder: The following steps create a macro that performs paste special with multiply.

(I) Open a new spreadsheet.

(ii) Enter numbers into a sheet.

(iii) Select cell A3, which contains the number 3, and copy the value to the clipboard.

(iv) Select the range A1:C3.

(v) Use **Tools > Macros > Record Macro** to start the macro recorder. The Record Macro dialog is displayed with a stop recording button.

(vi) Use **Edit > Paste** Special to open the Paste Special dialog.

(vii) Set the operation to multiply and click **OK**. The cells are now multiplied by 3.

(viii) Click Stop Recording to stop the macro recorder. The OpenOffice.org Basic Macros dialog opens.

(ix) Select the current worksheet. For this example, the current Calc worksheet is Untitled 1. Existing worksheets show a library named Standard. This library is not created until the worksheet is saved, or the library is needed, so at this point your new worksheet does not contain a library. You can create a new library to contain the macro, but this is not necessary.

(x) Click New Module. If no libraries exist, then the Standard library is automatically created and used. In the New Module dialog, type a name for the new module or leave the name as Module1.

(xi) Click OK to create a module named Module1. Select the newly created Module1, enter the macro name Paste Multiply and click Save.

(xii) The created macro is saved in Module1 of the Standard library in the Untitled 1 worksheet.

TiP

*Do not try to learn the steps but have a practical outlook of them so that they can be memorised easily.*

Q 8. Let's say you have $10,000 that you want to invest in two mutual funds for one year. Fund X is a low risk fund with 8% interest rate and Fund Y is a higher risk fund with 12% interest rate. How much money should be invested in each fund to earn a total interest of $1000? Find the solution using Solver feature.

Ans. To find the answer using Solver:

(i) Enter labels and data:

(a) **Row labels:** Fund X, Fund Y, and total, in cells A2 thru A4.

(b) **Column labels:** interest earned, amount invested, interest rate, and time period, in cells B1 thru E1.

(c) **Interest rates:** 8 and 12, in cells D2 and D3.

(d) **Time period:** 1, in cells E2 and E3.

(e) **Total amount invested:** 10000, in cell C4.

(ii) Enter an arbitrary value (0 or leave blank) in cell C2 as amount invested in Fund X.

(iii) Enter the formulae given below:

(a) In cell C3, enter the formula C4-C2 (total amount - amount invested in Fund X) as the amount invested in Fund Y.

(b) In cells B2 and B3, enter the formula for calculating the interest earned (see below).

(c) In cell B4, enter the formula B2+B3 as the total interest earned.

	A	B	C	D	E
1		Interest Earned	Amount Invested	Interest Rate	Time Period
2	Fund X		0	8	1
3	Fund Y	1200	10000	12	1
4	Total	1200	10000		

(iv) Choose **Tools -> Solver**. The solver dialog opens as shown in Figure.
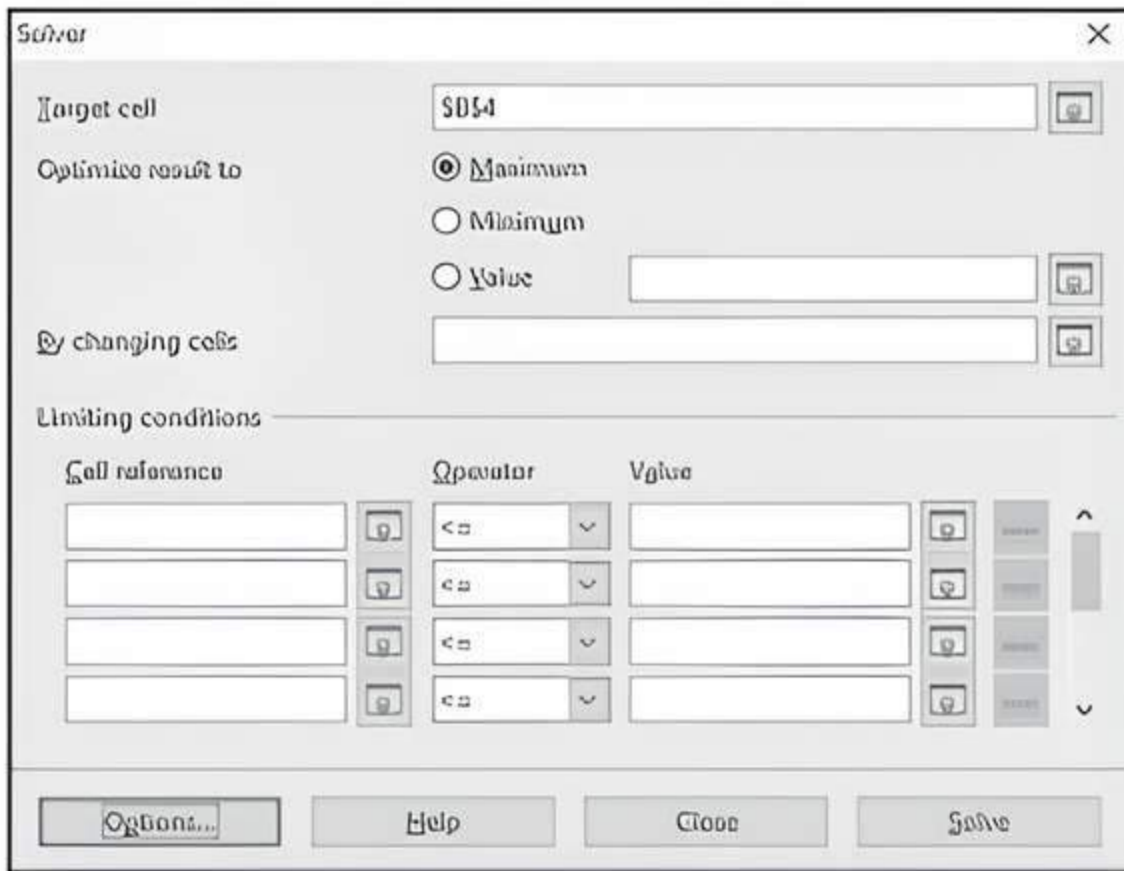
(v) Click in the Target cell field. In the sheet, click in the cell that contains the target value. In this example, it is cell B4 containing total interest value.

(vi) Select Value of and enter 1000 in the field next to it. In this example, the target cell value is 1000 because your target is a total interest earned of $1000. Select Maximum or Minimum if the target cell value needs to be one of those extremes.

(vii) Click in the By changing cells field and click on cell C2 in the sheet. In this example, we need to find the amount invested in Fund X (cell C2).

(viii) Enter limiting conditions for the variables by selecting the Cell reference, Operator and Value fields. In this example, the amount invested in Fund X (cell C2) should not be greater than the total amount available (cell C4) and should not be less than 0.

(ix) Click OK. A dialog appears informing you that the Solving successfully finished. Click Keep Result to enter the result in the cell with the variable value. The result is shown below.

Chapter Test

Multiple Choice Questions

Q 1. In OO Calc, which options should be used to accept/ reject the changes in the shared sheet?
- a. Edit->Accept
- b. Edit->Changes->Record
- c. Edit->Changes->Show
- d. Edit->Changes-Accept/Reject

Q 2. What will do by filter?
- a. Displays the records that meet the criteria
- b. Displays only one record to delete
- c. Modify all the records at once
- d. All of the above

Q 3. What is integer value of 3/2+5*0.5+A1 where A1=0.75
- a. 7.5
- b. 5
- c. =
- d. 6

Q 4. What would be content of A8 if A4 has count (A1:A7) and if A1=1, A2=2, A3=4, A11=12, A6=Blank, A7=Text
- a. 7
- b. 5
- c. 17
- d. 29

Q 5. We can consolidate data by ....
- a. row label
- b. column label
- c. Both of these
- d. None of these

Q 6. Which of the following functions are available in consolidate window?
- a. Max
- b. Min
- c. Count
- d. All of these

Q 7. In which option we have to specify the target range (Where we want the result to be displayed)
- a. Source data range
- b. Copy results to
- c. Need result at
- d. Target range

Fill in the Blank Type Questions

Q 8. The first cell in the upper left corner is ....

Q 9. .... is a feature that's opposite to undo.

Q 10. By default, the name of the first workbook is ....

Assertion and Reason Type Questions

Directions (Q. Nos. 11-13): *In the questions given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the correct option.*
- a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
- b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not correct explanation of Assertion (A).
- c. Assertion (A) is true, but Reason (R) is false.
- d. Assertion (A) is false, but Reason (R) is true.

Q 11. **Assertion (A):** The Solver option is present in the data group.

Reason (R): The primary purpose of Solver is simulation and optimisation of various business and engineering models.

Q 12. Assertion (A): The product function calculates the product of cells.
Reason (R): We can use the subtotals feature of subtotal data in a sorted list.

Q 13. Assertion (A): We can use What-if-Analysis tools to estimate our monthly savings that meet our retirement goals.
Reason (R): The What-if Analysis option is present in the information tab.

Case Study Based Questions

Q 14. SUBTOTAL is a function listed under the Mathematical category when you use the Function Wizard (Insert > Function). Because of its usefulness, the function has a graphical interface accessible from Data > Subtotals. As the name suggests, SUBTOTAL totals data arranged in a array—that is, a group of cells with labels for columns. Using the Subtotals dialog, you can select up to three arrays, then choose a statistical function to apply to them. When you click OK, Calc adds subtotal and grand total rows to the selected arrays, using the Result and Result2 cell styles to differentiate those entries. By default, matching items throughout your array will be gathered together as a single group above a subtotal.

(i) Where would you find the Subtotal function?
   a. Under the Formula tab.
   b. Under the Home tab.
   c. Under the Insert tab.
   d. Under the Data tab.

(ii) Sally impressed her boss by creating an Outline of data in a worksheet with each section containing a Subtotal. Her boss wishes to print each of the 300 sections and their totals on a separate page. Which of the following options will succeed in doing this in most EFFICIENT way?
   a. This is a print setting. Set the printer to print each page on a separate piece of paper.
   b. Insert manual page breaks by using the Insert Page Break function located under the Page Layout tab on the Ribbon.
   c. Select the data, launch the Subtotal dialog box and tick the box for Page Break between Groups.
   d. All of the options listed above are correct.

(iii) To display the sum of values .... option must be checked in the subtotals dialog box.
   a. calculate subtotals for
   b. calculate subtotals all
   c. calculate subtotals from
   d. All of the above

(iv) What are the different tabs available in the subtotals dialog box?
   a. 1st Group   b. 2nd Group
   c. 3rd Group   d. All of these

(v) What are the common functions available in subtotal dialog box?
   a. Sum   b. Average
   c. Count   d. All of these

Q 15. Sometimes, we need data based on different categories. SUBTOTALS help us to get the totals of several columns of data broken down into various categories. For example, let's consider garment products of different sizes manufactured. The SUBTOTAL function will help you to get a count of different sizes in your warehouse.

The SUBTOTAL function in Excel allows users to create groups and then perform various other Excel functions such as SUM, COUNT, AVERAGE, PRODUCT, MAX, etc. Thus, the SUBTOTAL function in Excel helps in analysing the data provided.

(i) What is the use of subtotals feature?
(ii) How to open subtotals feature in OpenOffice calc?
(iii) Name some parts of subtotals tab.
(iv) Which option pops up a drop-down list which contains columns to group by for subtotals?
(v) How to see the different levels of subtotals?

Very Short Answer Type Questions

Q 16. Which option allows to select the source of data for the consolidation?

Q 17. Explain Variable cell.

Q 18. What are the common functions available in Subtotal dialog box?

Q 19. Answer the following questions:
(i) How to open navigator window?
(ii) What is a shortcut key to open navigator window?

Q 20. What is the use of shrink button?

Q 21. How to open GoalSeek dialog box?

Short Answer Type Questions

Q 22. What options are available in create Scenario dialog box?

Q 23. Differentiate between relative and absolute hyperlinks.

Long Answer Type Questions

Q 24. Write steps to create or apply subtotals in a worksheet.

Q 25. What are the several situations that can occur when we save a shared document?