

MS-EXCEL
FOR
CHARTERED
ACCOUNTANTS

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WESTERN INDIA REGIONAL COUNCIL
OF THE INSTITUTE OF CHARTERED
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TABLE OF CONTENTS

1	Basics & Beyond.....	4
1.1	Introduction.....	4
1.2	The EXCEL Screen.....	4
1.3	Moving Around.....	5
2	Data Entry.....	8
2.1	Text.....	8
2.2	Number (including date, time, percent).....	8
2.3	Formulae.....	8
2.4	Functions.....	9
2.5	AutoComplete.....	9
2.6	AutoCorrect.....	10
2.7	AutoFill.....	10
2.8	Data Validation.....	11
3	Totals & More.....	13
3.1	+++ ,... why not?.....	13
3.2	SUM() Function.....	13
3.3	QuickSum.....	13
3.4	SUBTOTAL() Function.....	14
3.5	SUMIF() Function.....	14
3.6	Sorting Data.....	14
3.7	Sub-Totals.....	15
3.8	Conditional Sum Add-In.....	16
4	Queries in Lists.....	17
4.1	AutoFilter.....	17
4.2	Advanced Filter.....	17
5	Functions.....	19
5.1	Lookup Functions.....	19
5.2	Date Functions.....	19
5.3	Numeric Functions.....	21
5.4	Text Functions.....	21
5.5	Financial Functions.....	21
5.6	Some more functions.....	22
6	The Look & Feel of Output.....	24
6.1	Formatting.....	24
6.2	Styles.....	25
6.3	Conditional Formatting.....	26
6.4	Custom Views.....	26
6.5	Printing.....	27
6.6	Saying it with Charts.....	27
7	Copying & Moving.....	28
7.1	Paste Special.....	29
8	Saving Work & Protecting It.....	30
8.1	File-Level Protection.....	30
9	Analysing Data.....	32

9.1	Data Tables	32
9.2	Scenarios	33
9.3	Goal Seek	33
9.4	Solver	33
10	PivotTables	35
10.1	Creating a Pivot Table	35
10.2	Layout of the PivotTable	37
10.3	Some Examples:.....	37
11	Auditing Tools	41
11.1	Auditing Toolbar.....	41
11.2	Documenting a Sheet.....	41
11.3	Migrating Data from Other Software.....	43
11.4	Common Audit Techniques	43
12	Automating MS-EXCEL	44
12.1	Open EXCEL each time computer starts	44
12.2	Open a particular file each time EXCEL starts.....	44
12.3	Create a new file based on a template each time computer starts.....	44
12.4	Specifying the Defaults in EXCEL.....	44
12.5	Customizing Menus & Toolbars.....	45
12.6	Customization Options.....	46
12.7	Templates	46
12.8	Workspaces.....	47
12.9	Talking with Other Software	47
13	Introduction to Macros.....	48
13.1	Global Macros vs. Individual Macros.....	48
13.2	Use of Macro Recorder.....	49
13.3	Running Macros.....	49
13.4	Basics of VB Programming	51
1	ANNEXURE A: KEYBOARD SHORTCUTS	53
2	ANNEXURE “B” IMPORTANT EXCEL FUNCTIONS.....	55
3	ANNEXURE “C”: COMMON ERROR CODES	59
4	ANNEXURE “D” LIST OF ADD-INS PROVIDED WITH MS-EXCEL	61

1 Basics & Beyond..

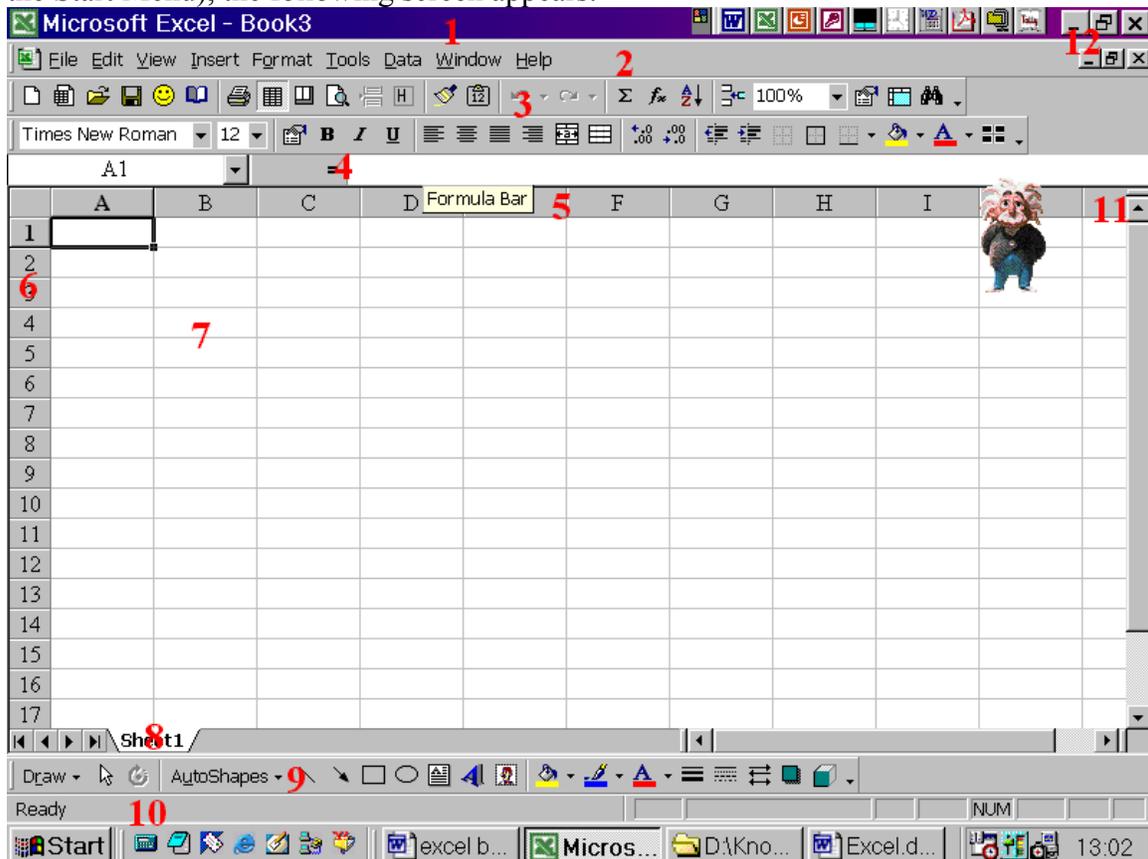
1.1 Introduction

Microsoft Excel is a spreadsheet program that is designed to record and analyze numbers and data. Excel is very widely used for accounting and financial purposes.

The files created in Excel are known as workbooks. In turn, each workbook can contain one or more worksheets. An Excel worksheet is laid out like a grid with horizontal rows and vertical columns. Columns are labeled with alphabets (A, B, C, etc.) while rows are given numbers (1, 2, 3, etc.). The intersection of a row and a column is called a cell. A cell is referred by a combination of column alphabet and row number (A1, A2, etc.). A cell is a primary unit of measure in Excel and all the information is stored in cells. A range is a collection of contiguous cells (which form a rectangular block) on which the user wants to perform similar type of calculations. A range is referred to by a combination of the cell addresses of the diagonally opposite cells separated by a colon (A1:D6)

1.2 The EXCEL Screen

On loading MS-EXCEL (either through the shortcut menu, or icon on desktop or through the Start Menu), the following screen appears:



The various components of the EXCEL Screen are explained in brief below:

Sr.	Contains	Remarks
1	Title Bar	Contains the name of the File currently open and also has the window control buttons to either close or minimize the program
2	Menu Bar	Contains the list of various commands that can be performed in MS-EXCEL. It can be invoked either by a mouse click or the Alt Key from the keyboard
3	Tool Bars	Contain buttons for some commonly performed tasks. The commands can be activated by a mere mouse-click
4	Formula Bar	Displays the content of the active cell. The left hand side of this bar includes the name box which contains the list of all the range names and thereby facilitates quicker worksheet navigation
5	Column Labels	Contains the headings of the columns. Can be used for column-wide operations like increasing column width, hiding columns, formatting entire columns, etc.
6	Row Labels	Contains the headings of the rows. Can be used for row-wide operations like increasing row height, hiding rows, formatting entire rows, etc.
7	Sheet Area	The place where the actual data is entered. The Active Cell is surrounded by a dark rectangle.
8	Sheet Tab	Gives reference to the sheet which is currently active. One can quickly navigate through different sheets from here
9	Additional Tool Bars	Some additional toolbars
10	Status Bar	Includes the various information sent by EXCEL. Of particular use is the QuickSum Feature in the status bar which automatically displays the totals of the selected cells
11	Scroll Bars & Split Indicator	The Scroll Bars can be used for quick movement within a worksheet. The extreme top of the vertical scroll bar and the extreme right of the horizontal scroll bar contain a split indicator which permits the user to divide the sheet into two parts.
12	Application Control Buttons	These buttons are used to minimize or control the size of a particular file.

The cell A1 is surrounded with dark rectangular block. It is the active cell. Any entry of data is made into the active cell.

1.3 Moving Around

A worksheet can contain upto 65,536 rows and 256 columns whereas the visibility of the information on the screen is restricted to the size of the screen (generally 18-20 rows and 8-10 columns are visible at a time). Therefore, one may need to move around different

sections of a worksheet. There are various ways in which one can move around very efficiently.

1.3.1 Keyboard Shortcuts

The most widely used option is of course a wheel-mouse but at times, the keyboard is very handy. For example, to reach the last entered cell in a worksheet one just uses the <Ctrl>+<End> combination. Similarly, <Ctrl>+<Home> takes one to the first cell of the worksheet (which is always A1). Using <Home> takes one to the first cell of the particular row. <End> can be used with the combination of the arrow keys to reach at the end of the list in the particular direction. A complete list of keyboard shortcuts is provided in Annexure “A”

1.3.2 Range Names

Sometimes it is convenient to use a descriptive name to name a cell or a range of cells. Named ranges can also be used in formulas and functions. To name a range:

1. Select the range to be named.
2. Click the Name box on the left side of the formula bar
3. Type the range name (up to 255 characters). Valid names cannot use spaces and the first character must not be a number. Also, the name cannot look like a cell address such as B14.
4. Press Enter.

OR

1. Select the range
2. Select Insert/Name
3. Choose Define
4. Type the name of the range.

Once a particular range has been named, reaching that particular cell is very easy. Just choose the range name from the Name Box and you are taken there.

1.3.3 Window Split & Freeze

Many a times, one wants to refer to two different sections of a worksheet. For example, in case of a long list, the headings might scroll up. In that event, one can consider to split the window into two parts. One can split the windows by dragging the split handle which appears at the extreme top of the vertical scroll bar and the extreme right of the horizontal scroll bar. In the alternative, one can position the cell pointer to the cell where one desires a split and choose the command Split from the Window Menu. To remove the split, either re-drag the split bar or choose Window->Unsplit.

While the movement of the split windows is synchronized, none of them is fixed. Therefore, it is possible to loose track of the titles if the mouse movements are not properly handled. To avoid such a situation, one can choose Window->Freeze Panes. To reverse the process, choose Window->Unfreeze Panes.

1.3.4 Multiple Windows

Windows Split does not permit asynchronous viewing. For such a purpose, one can consider opening multiple windows of the same file. To do this, choose Window-> New Window. Re-size both the windows using the mouse pointer. Of course, multiple windows of the same file are at times confusing to handle.

2 Data Entry

Information entered into a cell is understood either as a text entry, a value or a formula. Functions are also treated equivalent to formulae. Dates, time and percentages are stored as numbers (values). It is important that a particular information is stored in the correct format.

2.1 Text

Text entries or labels can contain any combination of letters, numbers and spaces. A label which is too long for the width of a cell floats across the cells to its right / left / both (depending on the alignment of the cell) as long as those cells do not contain any information. If the cells aren't empty, the label is truncated or cut-off. By default, labels are left-justified.

2.2 Number (including date, time, percent)

Numbers and text are treated differently. The default alignment for text is left whereas for numbers, it is right. Secondly, if a value is too large to fit in the current cell width, Excel displays a series of # characters as a error signal. A list of various error signals and what they denote is enclosed as Annexure "C". Values are displayed in the General Number Format. This display can be customized using the Format Cells command.

2.3 Formulae

A cell can also derive the value through a formula. The building of a formula is intuitive and can be easily mastered through practice. For example, if Cell A1 contains 3000 being the tax payable and you want to calculate the surcharge, go to Cell A2 and type the formula +A1*5% (as the surcharge rate is 5%) and Excel does the calculation for you. To get the gross tax liability, go to Cell A3 and say +A1+A2 (as gross tax includes tax and surcharge). The formula can also be built by pointing to the dependent cells instead of typing the cell address. Excel evaluates a formula in a particular order of precedence. The operators used in a formula and precedence accorded by EXCEL are as under:

Operator	Description	Precedence
:	Range of Cells	1
,	Union of Cells	2
%	Percentage	3
^	Exponentiation	4
*	Multiplication	5
/	Division	6
+	Addition	7
-	Subtraction	8
&	Concatenation	9
= < >	Comparison Operators	10

If the order of evaluation is to be changed, parenthesis should be used to group expressions within a formula. If more than one pair of parenthesis is present in a formula, Excel evaluates the expression in the innermost parenthesis first.

2.4 Functions

A cell can also derive its value through functions. Functions are processes, which have been defined and standardized by Excel. A complete list of functions can be found at Insert -> Function. A list of commonly used functions is enclosed as “Annexure B”. Few more common functions include the SUM function (which totals all the numbers in a particular range – of course, EXCEL also has the QuickSum Feature which displays the sum of the selected range in the bottom pane) and the IF function used to manage alternate calculations in varying situations (it is very simple to use and can be nested, but take care to use the brackets appropriately otherwise the results can be disastrous!). A very common example of the use of IF function is to calculate the tax payable by an individual. For example, if cell B3 contains the net taxable income of an individual, the tax payable by him (excluding surcharge) can be calculated using a nested IF function as stated: $=IF(B3>150000,(+B3-150000)*0.3+19000,IF(B3>60000,(B3-60000)*0.2+1000,IF(B3>50000,(B3-50000)*0.1,0))$

2.4.1 Using the Function Builder

A function takes in certain standard arguments, undertakes the evaluation process and returns a particular result. In case one is unaware of the arguments, one can type the function name along with the opening parenthesis and click on the = sign on the Formula Bar. The Function Wizard presents the list of arguments and the brief description of the arguments. In such a fashion, one can build a formula through a Wizard and simultaneously learn the function itself. For example, the Function Builder Dialog Box in the case of PMT function is shown below:

PMT

Rate = number

Nper = number

Pv = number

Fv = number

Type = number

=

Calculates the payment for a loan based on constant payments and a constant interest rate.

Rate is the interest rate per period for the loan.

Formula result =

OK Cancel

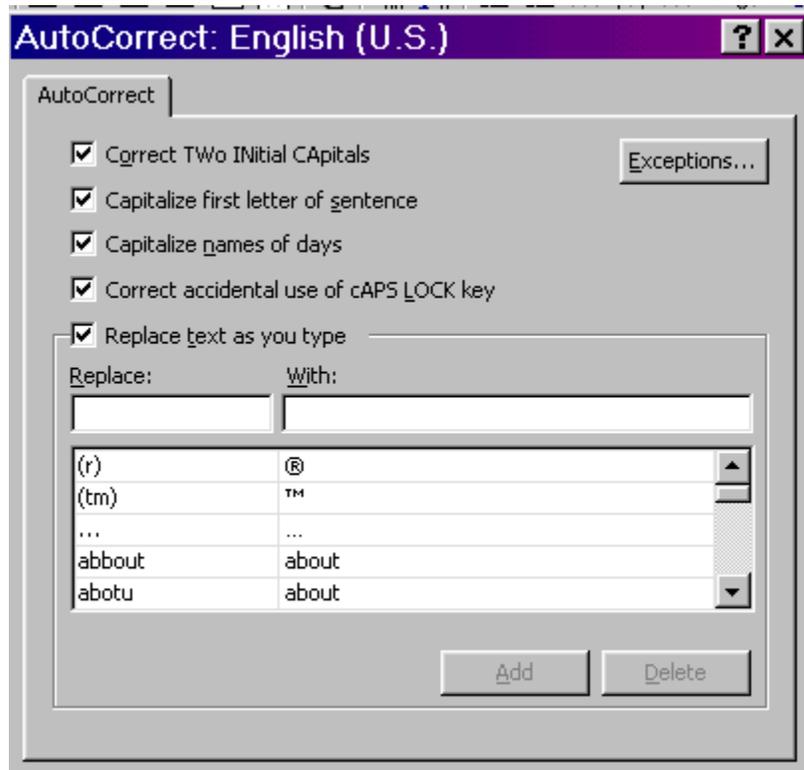
2.5 AutoComplete

Manual data entry into a range of cells can be made faster with the assistance of AutoComplete - a feature which suggests the current cell entry based on the existing list. It should however be noted that AutoComplete has certain limitations – it does not work

if there is a blank cell in the list, it works only when a unique combination consisting of at least one alphabet is met in the list. In case of multiple similar entries, a better option is the Pick from List which appears in the right-click shortcut of the mouse.

2.6 AutoCorrect

The AutoCorrect feature automatically corrects common typing errors as you type. For this purpose, Excel uses a database of commonly misspelled words. This database can be customized from the Tools -> AutoCorrect Menu. The following screen comes up:



One can use the AutoCorrect feature to quickly type some normal text which is regularly used in an organization. For example, the organization name can be made a subject matter of AutoCorrect to speeden up data entry.

2.7 AutoFill

AutoFill is an in-built feature whereby one can fill up a particular range of cells based on some pre-determined series. For example, if one cell contains January and the next one contains February, one can just use the fill handle to automatically complete the entire range with the month names. One can create custom lists pertaining to one's organization (for example, plant locations) from Tools -> Options -> Custom Lists. The following screen appears where one can either type in the required items or pick from a range of cells

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