Unit 14

COMPUTERISED ACCOUNTING

Contents

Points to recall

The following points are to be recalled before learning computerised accounting:

- Accounting cycle
- Invoice
- Concept of depreciation

AL2PMR

Learning Objectives

To enable the students to:

- Understand the usage of computers in maintaining accounts
- Evaluate the advantages and limitations of Computerised Accounting System
- Apply MS Word and MS Excel in maintaining accounts

Key terms to know

- Computerised Accounting System (CAS)
- Input, CPU, output
- Accounting software
- Grouping and codification

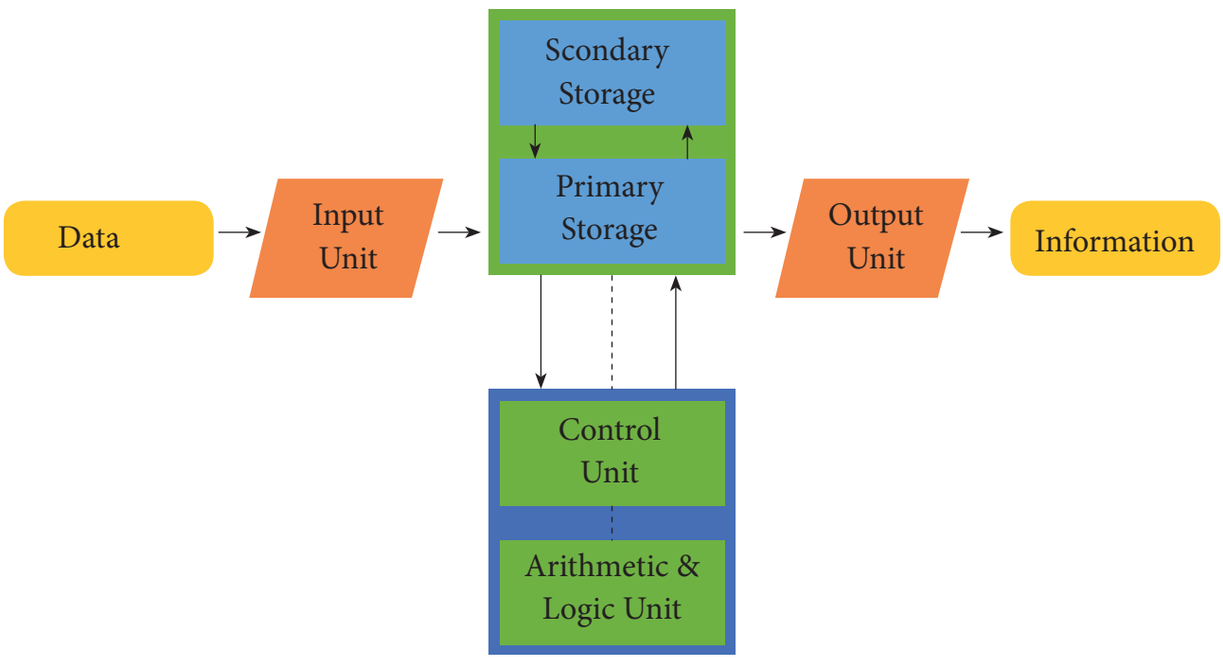
14.1 Introduction to computers

Student activity

Think: A trader has more than 10 years of accounting records. He finds it difficult to keep them all, because it requires a large store room. Is there any way to overcome this difficulty?

A computer can be described as an electronic device designed to accept raw data as input, processes them and produces meaningful information as output. It has the ability to perform arithmetic and logical operations as per given set of instructions called program. Today, computers are used all over the world in several areas for different purposes.

A computer system has mainly three components namely, input unit, central processing unit and output unit. These components are the building blocks of a computer and define its architecture. The relationship among these components is established by the following diagram:



CPU (Central Processing Unit)

Computers are nowadays widely used in scientific research, education, business, accounting, transportation, communication, banking, defence, etc. With the expansion of business, the number of transactions has increased tremendously and as a result in accounting the manual method of keeping and maintaining records have become unmanageable. The manual method of accounting is being gradually replaced with the introduction of computers in business.

14.2 Computerised Accounting System (CAS)

Computerised accounting system refers to the system of maintaining accounts using computers. It involves the processing of accounting transactions through the use of hardware and software in order to keep and produce accounting records and reports. Computerised

accounting system takes accounting transactions as inputs that are processed through accounting software to generate the following reports:

- Day books /Journals • Ledger • Trial balance
- Trading account • Profit and loss account • Balance sheet, etc.

In accounting, computer is commonly used in the following areas:

a) Recording of business transactions b) Payroll accounting
c) Stores accounting and d) Generation of accounting reports

It is to be noted that the fundamentals of accounting do not change whether books of accounts are maintained manually or computerised. The same principles of debit and credit are equally applicable in a computerised environment.

14.2.1 Features of computerised accounting system

Computerised Accounting System (CAS) facilitates the management and other users to maintain accounts and prepare financial statements using computers. The reports generated through CAS are used to analyse financial status of a business and take necessary decisions to strengthen the financial soundness of the business. The CAS possesses the following features:

i) Simple and integrated: CAS is designed to automate and integrate all the business operations such as purchase, sales, finance, inventory and manufacturing. The CAS may be integrated with enhanced Management Information System (MIS), multi-lingual and data organisation capabilities to simplify all the business processes of the organisation easily and cost-effectively.

ii) Speed: It can perform functions at much higher speed than doing the same manually.

iii) Accuracy: Computers perform functions with high degree of accuracy. If hardware, software and input by people are proper, the computerised accounting system can assure of accurate outcome.

iv) Reliability: Computers are used to process large volumes of data and hence, data provided by it are reliable.

v) Versatility: Computer and accounting software have the ability to perform diverse tasks. For example, by simply recording accounting entries through accounting software, one can get trial balance, trading account, profit and loss account, balance sheet and diverse reports.

vi) Transparency: With computerised accounting, the organisation will have greater transparency of day-to-day business operations and access to the vital information.

vii) Scalability: CAS enables processing of any volume of data in tune with the change in the size of the business.

viii) On-line facility: CAS offers online facility to store and process transaction and data so as to retrieve information to generate and view financial reports in any part of the world.

ix) Security: In CAS, only the authorised users are permitted to have access to accounting data. Under manual accounting system, it is very difficult to secure such information as it is open to inspection by any person dealing with the books of accounts.

14.2.2 Components of Computerised Accounting System

Components of CAS can be classified into six categories, namely, i) Hardware ii) Software iii) People iv) Procedure v) Data and vi) Connectivity.

i) Hardware: The physical components of a computer constitute its hardware. Hardware consists of input devices and output devices that make a complete computer system. Examples of input devices are keyboard, optical scanner, mouse, joystick, touch screen and slylus which are used to feed data into the computer. Output devices such as monitor and printer are media to get the output from the computer.

ii) Software: A set of programs that form an interface between the hardware and the user of a computer system are referred to as software. The following are the various types of software:

a) System software: A set of programs to control the internal operations such as reading data from input devices, giving results to output devices and ensuring proper functioning of components is called system software. The system software includes the following:
   (1) Operating system: A set of tools and programs to manage the overall working of a computer using a defined set of hardware components is called an operating system. It is the interface between the user and the computer system. Example: DOS, Windows, UBUNTU, imac, etc.
   (2) Programming software: Special software to accept data and interpret them in the form of machine/assembly language understandable by a computer. Example: C, PASCAL, COBOL, etc.
   (3) Utility software: These are designed specifically for managing the computer device and its resources. Example: File manager, Anti-virus software, etc.

b) Application software: Programs designed to perform a specific function for a user. An application software can be classified as follows:
   (i) General purpose software: This type of application can be used for a variety of tasks and not limited to one particular function. Example: MS-Office.
   (ii) Specific purpose software: This software is created to execute one specific task and they are customised to the needs of user. Example: Accounting software, payroll software, etc.]

Finacle is a banking software.

iii) People: The most important element of a computer system is its users. They are also called live-ware of the computer system. The following types of people interact with a computer system.

a) System analysts: People who design the operation and processing of the system.
b) System programmers: People who write codes and programs to implement the working of the system.

c) System operators: People who operate the system and use it for different purposes. They are also called as end users.

iv) Procedure: Procedure is a step by step series of instructions to perform a specific function and achieve desired output. In a computer system there are three types of procedures.

a) Hardware oriented procedure: It defines the working of a hardware component.

b) Software oriented procedure: It is a set of detailed instructions for using the software.

c) Internal procedure: It maintains the overall working of each part of a computer system by directing the flow of information.

v) Data: The facts and figures that are fed into a computer for further processing are called data. Data are raw input until the computer system interprets them using machine language, stores them in memory, classifies them for processing and produces results in conformance with the instructions given to it. Processed and useful data are called information which is used for decision making.

vi) Connectivity: When two or more computers are connected to each other, they can share information and resources such as sharing of files (data/music, etc), sharing of printer, sharing of facilities like the internet. This sharing is possible using wires, cables, satellite, infra-red, bluetooth, microwave transmission, etc.

14.3 Advantages of Computerised Accounting System

The main advantages of computerised accounting system are as follows:

(i) Faster processing: Computers require far less time than human beings in performing a particular task. Therefore, accounting data are processed faster using a computerised accounting system.

(ii) Accurate information: There is less space for error because only one account entry is needed for each transaction unlike repeated posting of the same accounting data in manual system.

(iii) Reliability: Computer systems are immune to boredom, tiredness or fatigue. Therefore, these can perform repetitive functions effectively and are highly reliable.

(iv) Easy availability of information: The data are easily available and can be communicated to different users at the same time.

(v) Up-to-date information: Account balances will always be up to date since the records are automatically updated as and when accounting data are entered or stored.

(vi) Efficiency: The computer based accounting system ensures better use of time and resources.

(vii) Storage and retrieval: Computer based systems require a fractional amount of physical space as compared to the books of accounts in the form of journals, ledgers and accounting registers.

(viii) Works as a motivator to employees: Employees using computer systems feel more valued as they are trained and specialised for the job.

(ix) Automated document production: Accounting reports like trial balance and financial statements are generated automatically and are easily accessible just by a click of the mouse.

(x) MIS Reports: It is easier to monitor and control the business using the real time management reports generated by the computerised information systems.

Student activity

Think: Businesses can benefit by introducing computerised accounting system. But, how would employees feel about this change?

14.4 Limitations of Computerised Accounting System

The main limitations of CAS are being dependent upon the operating environment they work in. Some of them are listed as follows:

(i) Heavy cost of installation: Computer hardware needs replacement and software needs to be updated from time to time with the availability of newer versions.

(ii) Cost of training: To ensure effective and efficient use of computerised system of accounting, newer versions of hardware and software are to be introduced. These require special training and hence, cost is incurred to train the staff personnel.

(iii) Fear of unemployment: On account of the introduction of computerised accounting system, the employees feel insecure that they may lose employment and show less interest in computer related work.

(iv) Disruption of work: When computerised system is introduced, the existing process of accounting and other works are interrupted. This results in certain changes in the working environment.

(v) System failure: The danger of a system crashing due to some failure in hardware can lead to subsequent interruption of work. This is more when no back-up is made.

(vi) Time consuming: When there is system failure, an alternative arrangement needs to be made to avoid loss of work. This consumes some time to bring the regular processes back.

(vii) Unanticipated errors not known: Unlike human beings, computers do not have the capability to judge or detect unanticipated errors in the system.

(viii) Breaches of security: The danger of viruses and hacking into the system from outside creates a strong need for security of the system. Similarly, the person who has created the specific programme can easily defraud by tampering with the original records.

(ix) Health dangers: Extensive use of computers may lead to many health problems such as eye strain, muscular complaints, back ache, etc. resulting in reducing work efficiency as well as increased medical expenditure.

Student activity

Think: "People even without accounting knowledge can work on computerised accounting system" – Do you agree?

It is possible to track the origins of figures in the accounting system, from the original source document through to figures in the end-of-year final accounts. This is called audit trail.

14.5 Differences between manual and computerised accounting system

The differences between manual accounting and computerised accounting are given below:

Basis	Manual accounting	Computerised accounting
i) Recording of transactions	Transactions are recorded manually.	Transactions are recorded using computers.
ii) Storage	Transactions are stored in volumes of books.	Transactions are stored in well-designed databases.
iii) Preparation of ledger accounts, trial balance and financial statements	Ledger accounts, trial balance and financial statements are prepared manually.	Once journal entries are passed or subsidiary books are entered, data are processed automatically and ledger accounts, trial balance and balance sheet are automatically prepared.
iv) Preparation of report	Analysis of financial statements and preparation of report are to be done manually.	Financial statement analysis such as ratio analysis, preparation of cash flow statement, etc. is automatically done.
v) Time involved	It takes lot of time as everything from journalising to report generation is done manually.	It saves lot of time. Time is taken only for passing journal entries or entering data in subsidiary books. Once date are entered, preparation of ledger, trial balance, financial statements or report generation is done within seconds.
vi) Cost involved	The cost is high in manual accounting as several books of account are to be maintained.	The cost is less compared to manual accounting as all the records are kept in soft copy.
vii) Retrieval of data	It becomes difficult and time consuming to retrieve data as several books have to be gone through.	Retrieval of data is easier as the records are kept in soft copy in data base. By giving instructions, data can be retrieved quickly.
viii) Accuracy	Certain clerical errors such as arithmetical, error in carrying forward, etc. can happen.	If the input given is correct, the output will also be correct. Arithmetical error, error in carrying forward will not happen provided the programming is correct.
ix) Communication of report	Communication of report takes time and it is difficult as it has to be done manually to the users of information.	It is easier and takes lesser time. The report is in soft copy and if online facility is available, it can be communicated to the users very easily at any time and at any place.

14.6 Accounting software

The main function of CAS is to perform the accounting activities in an organisation and generate reports as per the requirements of the users. To obtain the desired results optimally, need based software or packages are to be installed in the organisation. Depending upon the suitability of business requirements there are three types of software, namely, (i) Readymade software, (ii) Customised software and (iii) Tailormade software.

(i) Readymade software

These packages are standardised or readymade packages which can be used by the business enterprises immediately on procurement. These packages are used by small and conventional business enterprises. Cost of installation and maintenance is very low. Training cost is negligible and sometimes the vendor provides free of cost training. These softwares are used by those enterprises where financial transactions are simple, uniform and routine in nature. Few examples of such type of software are Tally, Busy, Marg, Profitbooks.

(ii) Customised software

Many a time, it is not possible that ready-to-use packages suit the requirements of the business enterprise. In such circumstances, customised packages may help the business enterprise for fulfilling their requirements. Customised packages can be modified according to the need of the enterprise. For example, software can record attendance of the employees and on the requirement of the customer it can also count the absence of employees in a month, etc.

These packages are used by medium or large business enterprises. Cost of installation, maintenance and training is relatively higher than that of ready-to-use packages. These softwares are used by those enterprises where financial transactions are somewhat peculiar in nature.

(iii) Tailormade software

Large enterprises have their own way of functioning. For effective management information system, varied and specific information is frequently required by many users which may not be needed in case of small or medium scale enterprises. In such enterprises, depending upon their functioning, need based softwares known as tailored packages are installed. The cost of these packages is very high and specific training for using these packages is also required.

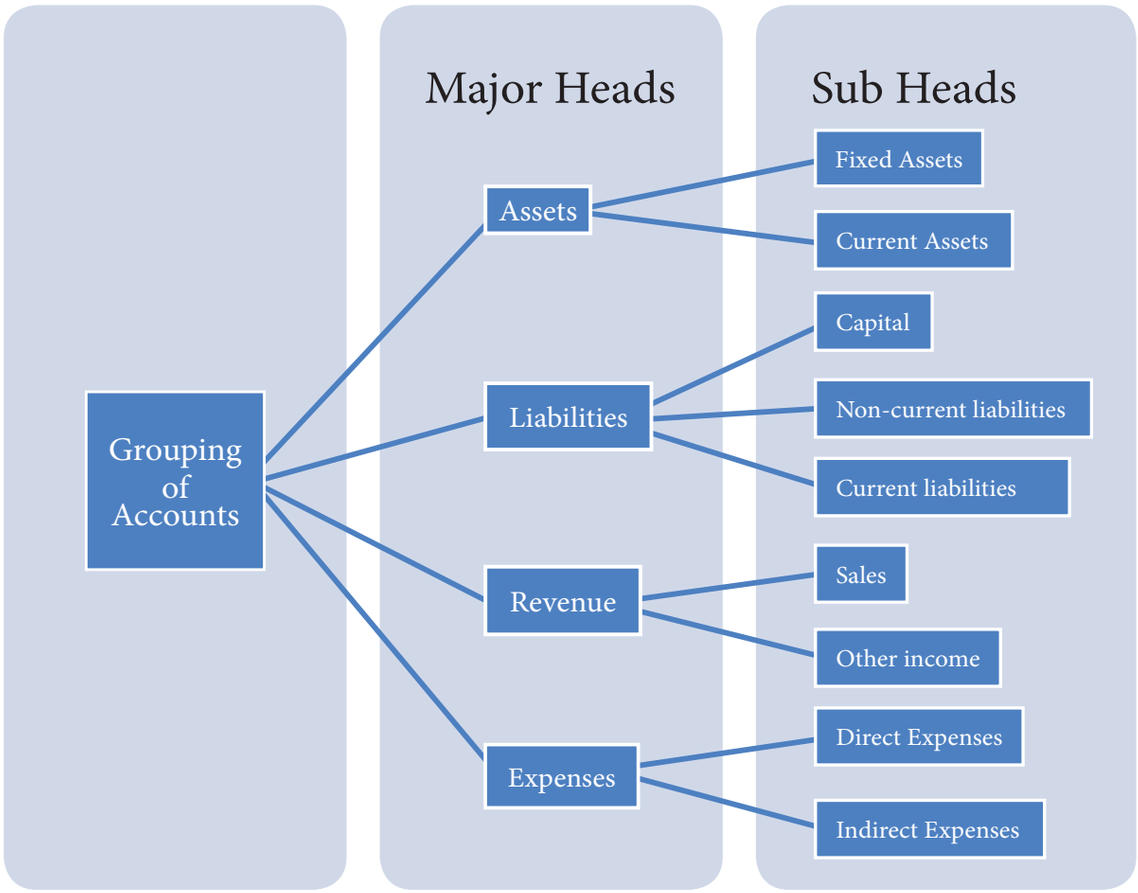
The following are the differences among the three types of software:

Basis	Ready to use software	Customised software	Tailor made software
(i) Nature of business	Small, conventional business	Large, medium business	Large
(ii) Cost of installation and maintenance	Low	Relatively high	High
(iii) Expected level of secrecy (software and data)	Low	Relatively high	Relatively high
(iv) Number of users and their interface	Limited	As per specifications	Unlimited
(v) Linkage to other information system	Restricted	Not restricted	Not restricted

(vi) Adaptability	High	Relatively high	Specific
(vii) Training Requirements	Low	Medium	High

14.7 Grouping and codification of accounts

When the volume and size of the business increase, the number of transaction increases. Therefore, it becomes necessary to have proper classification of data.



14.7.1 Grouping of accounts

In any organisation, the main unit of classification is the major head which is further divided into minor heads. Each minor head may have number of sub-heads. After classification of accounts into various groups namely, major, minor and sub-heads and allotting codes to each account these are programmed into the computer system.

A proper codification requires a systematic grouping of accounts. The major groups or heads could be Assets, Liabilities, Revenues and Expenses. The sub-groups or minor heads could be capital, non-current liabilities, current assets, sales and so on.

In general, the basic classifications of different accounts embodied in a transaction are resorted through accounting equation.

Assets = Liabilities + Capital + (Revenues – Expenses)

Each component of the above equation can be divided into groups of accounts as follows:

A. Liabilities and capital

Capital

- Capital
- Reserves and surplus

Non-Current Liabilities

- Long-term borrowings
- Other long-term liabilities

Current liabilities

- Short term borrowings
- Trade payables
- Other current liabilities

B. Assets

Fixed tangible assets

- Land and building
- Plant and machinery
- Furniture and fixtures

Intangible assets

- Goodwill
- Copyright
- Patents

Current Assets

- Short term investments
- Inventories
- Trade receivables
- Cash and cash equivalents
- Short term loans and advances
- Other current assets

C. Revenues

- Sales
- Other income

D. Expenses

- Material consumed
- Wages
- Manufacturing expenses
- Depreciation
- Administrative expenses
- Interest
- Selling and distribution expenses, etc.

14.7.2 Codification of accounts

Code is an identification mark. Generally, computerised accounting involves codification of accounts. Codification of accounts is needed where there are numerous accounts heads in an organisation. There is a hierarchical relationship between the groups and its components. In order to maintain the hierarchical relationships between a group and its sub-groups, proper codification is required.

The coding scheme of account heads should be such that it leads to grouping of accounts at various levels so as to generate various reports. For example, the codes for various accounts may be allotted as follows:

1 Liabilities and Capital 2 Assets 3 Revenues 4 Expenses

Under Liabilities and Capital

11 Capital 12 Non-current liabilities 13 Current liabilities

Under Assets

21 Non-current assets 22 Current assets

The above codification scheme utilises the hierarchy present in grouping of accounts. Major advantage of such coding is that if the account codes are listed in ascending order, these will be automatically listed as per the desired hierarchy.

14.7.3 Methods of codification

Following are the three methods of codification.

a. Sequential codes

In sequential code, numbers and/or letters are assigned in consecutive order. These codes are applied primarily to source documents such as cheques, invoices, etc. A sequential code can facilitate document search. For example:

Code	Accounts
CL001	ABC LTD
CL002	XYZ LTD
CL003	SCERT

b. Block codes

In a block code, a range of numbers is partitioned into a desired number of sub-ranges and each sub-range is allotted to a specific group. In most of the cases of block codes, numbers within a sub-range follow sequential coding scheme, i.e., the numbers increase consecutively. For example:

Code	Dealer type
100 – 199	Small pumps
200 – 299	Medium pumps
300 – 399	Pipes
400 – 499	Motors

c. Mnemonic codes

A mnemonic code consists of alphabets or abbreviations as symbols to codify a piece of information. For example:

Code	Information
SJ	Sales Journals
HQ	Head Quarters

14.8 Microsoft Office - MS Word and MS Excel Practical

14.8.1 MS-Word

(i) Creation of a word file : Start – All Programs – Microsoft Office – Microsoft Word – File Save As – File name – Save

(ii) Opening of a word file : File – Open – File name – Open

(iii) Saving an existing file : File Save (Short cut key: Control+S)

(iv) For closing a file : File Close

(v) Table creation: Insert – Table – Choose number of rows and columns

(vi) Formatting the text : To bold : Control+B;
To italicise : Control+I
To underline : Control+U

(vii) Paragraph alignment : To align text left : Control+L
To align text right : Control+R
To align text centre : Control+E
To align text justify : Control+J

(viii) Line spacing : Single line spacing : Control+1
Double line spacing : Control+2
1.5 line spacing : Control+5

(ix) Page lay out : Margin (normal, narrow, wide, etc.)
Orientation (Portrait, Landscape)
Size (A4, A5, etc)
Columns (1,2,3, etc.)

(x) Page number : Insert Page Number (top of the page, bottom of the page, etc.)

14.8.1(a) MS Word Practical

Illustration 1

Type the given below passage in MS-Word and format as directed.

Fra Luca Bartolomeo de Pacioli was an Italian mathematician (1447 – 1517). He is referred to as The Father of Accounting and Book keeping in Europe and he was the first person to publish a work on the double-entry system of book keeping.

Solution

Procedure

(i) Select and bold the name Fra Luca Bartolomeo de Pacioli.

(ii) Add single quote before The Father and after Book keeping.

'The Father of Accounting and Bookkeeping'

(iii) Select and italicise the word Europe.

Europe

(iv) Select and underline the word double-entry.

double-entry

(v) Select the full text and change the font style to Arial and font size to 10

Output:

Fra Luca Bartolomeo de Pacioli was an Italian mathematician (1447 – 1517). He is referred to as 'The Father of Accounting and Book keeping' in *Europe* and he was the first person to publish a work on the double-entry system of book keeping.

14.8.2 MS-Excel

i) Functions

a. Statistical functions

There are several statistical functions such that are inbuilt in MS Excel. The following are explained.

AVERAGE	Returns the average	=AVERAGE(cell1, cell2…)
MAX	Returns the largest value	=MAX(number1,number2)
MIN	Returns the lowest value	=MIN(number1,number2…)
COUNT	Counts the number of cells that contain numbers	=COUNT(value1,value2…)
COUNTA	Counts the number of cells that are not empty.	=COUNTA(range)
COUNTIF	Counts the number of cells that meet the given condition.	=COUNTIF(range,criteria)

b. Text functions

There are several text functions such that are inbuilt in MS Excel. The following are explained.

CONCATENATE	Joins several text strings into one text string	=CONCATENATE(text1, text2…)
UPPER	Converts all letters into Uppercase letters	=UPPER(text)
LOWER	Converts all letters into Lowercase letters	=LOWER(text)

c. Logical functions

There are several logical functions such that are inbuilt in MS Excel. The following are explained.

AND	Returns TRUE if all arguments are TRUE	=AND(logical1,logical2…)

OR	Returns TRUE if any one argument is TRUE else returns FALSE	=OR(logical1,logical2…)
IF	Returns one value if condition is true, and another value if false.	=IF(logical_test,value_if_true,value_if_false)

d. Financial functions

There are several financial functions such that are inbuilt in MS Excel. The following are explained.

SLN	Returns the depreciation of an asset for a specified period using the Straight Line method.	=SLN(cost,salvage,life)
PMT	Calculates the payment for a loan.	=PMT(rate,nper,pv,fv,type)
RATE	Returns interest rate per period of loan.	=RATE(nper,pmt,pv,fv,type)

14.8.2(a) MS-Excel practical

Illustration 2

The following are the scores obtained by some students in a competitive examination. Find out the average, the highest and the lowest score using appropriate function in spreadsheet.

	A	B	C	D	E	F	G	H
1	NAME	Anbu	Balu	Gobu	Ramu	Somu	Raju	Anu
2	SCORES	60	80	164	192	104	64	204

Solution

Procedure

(i) Open a new spreadsheet in MS-Excel

(ii) Enter all given values as given in the question.

(iii) To find the Average mark in cell B5 give the formula

=AVERAGE(B2:H2)

(iv) To calculate the highest score, in cell B3 give the formula

=MAX(B2:H2)

(v) To find the lowest rank in cell B4 give the formula

=MIN(B2:H2)

Answer:

The average score is 124, the highest score is 204 and the lowest score is 60.

Illustration 3

The following table is given to you. Find solution for the following questions.

	A	B	C	D	E	F	G	H	I	J
1	550	156			852	584	TAX	573	GST	1234
2	340	1285	468	584	268	222	CASH	BRS	STOCK	DEBT

A) How many cells contain numbers only?

B) Count the number of cells that contain any value.

C) Count the number of cells containing the value exceeding 1000.

Solution

Procedure

i) Open a new spread sheet in MS-Excel.

ii) Enter the data in cells from A1 to J2 as in the question

iii) To get the Number of cells containing numbers only, write the formula in B3

=COUNT(A1:J2)

iv) To get Number of cells that contain any value, write the formula in B4

=COUNTA(A1:J2)

v) To get the Number of cells which have values exceeding 1000, write the formula in B5

=COUNTIF(A1:J2,">1000")

Answer

A) 12 B) 18 C) 2

Illustration 4 (AND function)

There are three salesmen. Two days of sales achievement is given. You are required to find out the salesmen who have achieved a minimum sale of ₹ 400 on each day.

Salesman	Day 1 ₹	Day 2 ₹
Anand	500	250
Balu	600	500
Cibi	250	300

Solution

Procedure

1. Open new excel sheet.
2. Input the table as given in the question.
3. Enter the data "Achieved" in Cell D1.
4. Type the following in Cell D2:

   =AND(B2>=400,C2>=400)
5. Copy the formula in D2 into D3 and D4

Output

Salesman	Day 1 ₹	Day 2 ₹	Achieved
Anand	500	250	FALSE
Balu	600	500	TRUE
Cibi	250	300	FALSE

Illustration 5 (OR function)

Find out from the following data, minimum collection of ₹ 500 on any one day achieved by the sales counters.

Counter	Day 1 sales ₹	Day 2 sales ₹
Ground floor	600	600
First floor	850	300
Second floor	350	400

Solution

Procedure

1. Open new excel sheet.
2. Input the table as given in the question.
3. Enter the data "Achieved" in Cell D1.
4. Type the following in Cell D2:

   =OR(B2>=500,C2>=500)
5. Copy the formula from D2 into D3 and D4

Output

Counter	Day 1 sales ₹	Day 2 sales ₹	Achieved
Ground Floor	600	600	TRUE
First Floor	850	300	TRUE
Second Floor	350	400	FALSE

Illustration 6 (IF function)

Following is the list of students and percentage of marks obtained by them. If a student has secured a minimum of 50%, he is declared pass, else fail.

Student	Percentage of marks
1	59
2	60
3	65
4	45
5	35

Solution

Procedure

1. Open new excel sheet.
2. Input the table as given in the question.
3. Enter the data "Result" in Cell A3.
4. Type the following in Cell B3

   B3=IF(B1>=50,"Pass"",Fail")
5. Copy the formula from B3 to C3, D3 and E3

Output

Student	% of marks	Result
1	59	Pass
2	60	Pass
3	65	Pass
4	45	Fail
5	35	Fail

Illustration 7 (Depreciation – SLN method)

Calculate depreciation under Straight Line Method using Spreadsheet based on the details given below.

A	B	C	D	E	F
Asset	Cost of purchase ₹	Installation charge ₹	Transportation charge ₹	Salvage value ₹	Life in years
1. Machinery	200000	20000	5000	25000	10
2. Furniture	50000	4000	2000	5000	8

Solution

Procedure and answer

(i) Open a new spreadsheet in MS-EXCEL

(ii) Enter labels and values in the cells as given above

(iii) Write total cost in G1 and annual depreciation in H1

(iv) Calculate total cost in the cell G2 by the formula

=Sum(B2:D2) and copy formula to cell G3

(v) Calculate annual depreciation in the cell H2 by the formula

=SLN(G2,E2,F2) and copy formula to cell H3

Output

	A	B	C	D	E	F	G	H
1	**Asset**	**Cost of purchase ₹**	**Installation charge ₹**	**Transportation charge ₹**	**Salvage value ₹**	**Life in years**	**Total cost ₹**	**Annual depreciation ₹**
2	Machinery	200000	20000	5000	25000	10	225000	20,000
3	Furniture	50000	4000	2000	5000	8	56000	6,375

Illustration 8 (PMT)

Consider the following information:

Loan amount ₹ 3,00,000

Number of payment periods 48 months

Annual rate of interest 10%

Calculate periodic payment using PMT function.

Solution

Procedure

i) Open a new spreadsheet in MS-Excel

ii) Enter values in the cells as given below

	A	B
1	Rate of interest (p.a.)	10%
2	Number of instalments (nper)	48
3	Loan amount (pv)	-300000
4	FV	0
5	Type	0

iii) Compute PMT in the cell B6 by the formula

=PMT(B1/12,B2,B3,B4,B5)

Answer ₹ 7,608.78

Illustration 9 (RATE)

Mr. Vivek took a loan of ₹ 2,00,000 from State Bank of India, Chennai and number of installments is 84 months. Calculate the rate assuming payments ₹ 3,300 per month using appropriate function.

Solution

Procedure

(i) Open a new spreadsheet in MS-Excel

ii). Enter values in the cells as given below

	A	B
1	Number of instalments (nper)	84
2	Periodic payment (pmt)	3300
3	Loan amount (pv)	-200000
4	FV	0
5	Type	0

iii) Compute RATE in the cell B6 by the formula

=RATE(B1,B2,B3,B4,B5)*12

Answer 10%

Illustration 10 (Column chart and Line chart)

The total sales volume (Product wise) of TECH Ltd for the year 2016-2017 is given below:

Product	Sales ₹
Toothpaste	22000
Toothbrush	11000
Hair Oil	9000
Shampoo	13000
Toilet Soap	9500

a) Present the data in a column chart

b) Change the chart type to line chart.

Procedure

(a) **Column chart**

(i) Enter the data given in the table in a new spreadsheet.

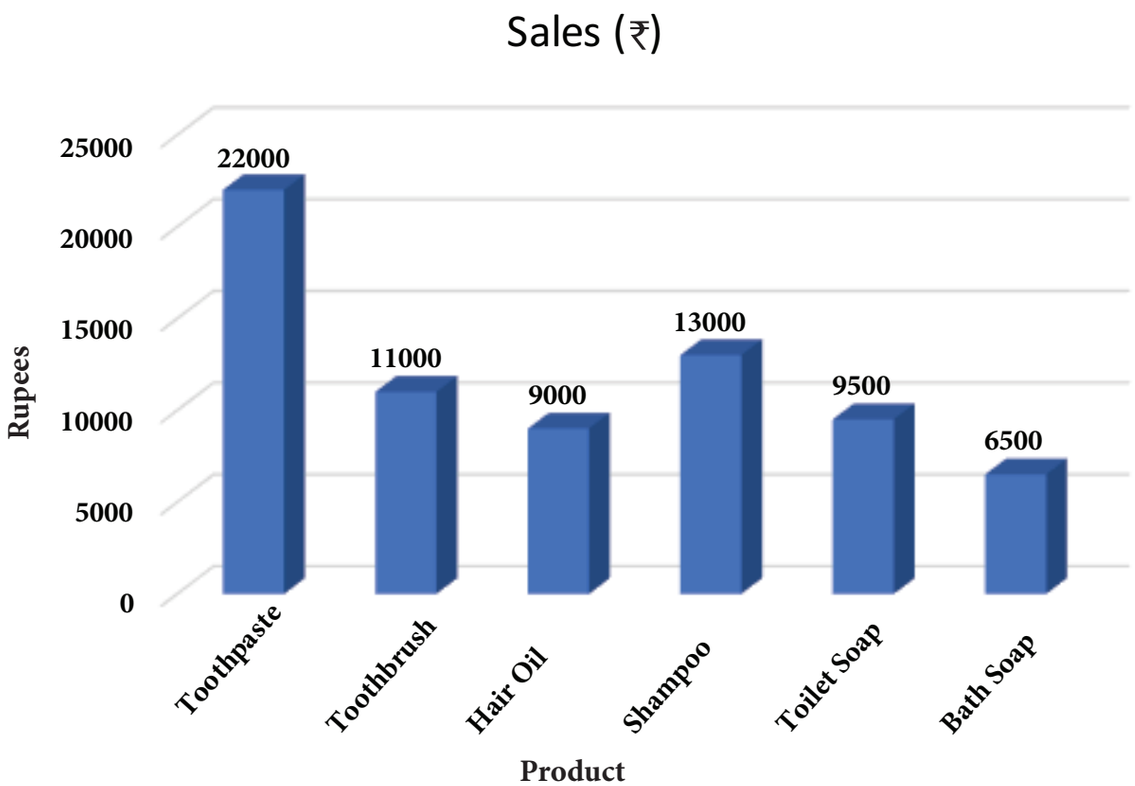
(ii) Select the data range from A1 to B7.

(iii) Go to Insert menu and select Column Chart (3D)

(iv) Right click column chart and select 'Add Data Labels'

(v) Choose layout tab under Chart tools.

(vi) Select Axis title and name them.



(b) Line Chart

(i) Select the data range from A1 to B7.

(ii) Go to Insert menu and select Line Chart (2D)

(iii) Right click chart and select 'Add Data Labels'

(iv) Choose layout tab under Chart tools.

(v) Select Axis title and name them.

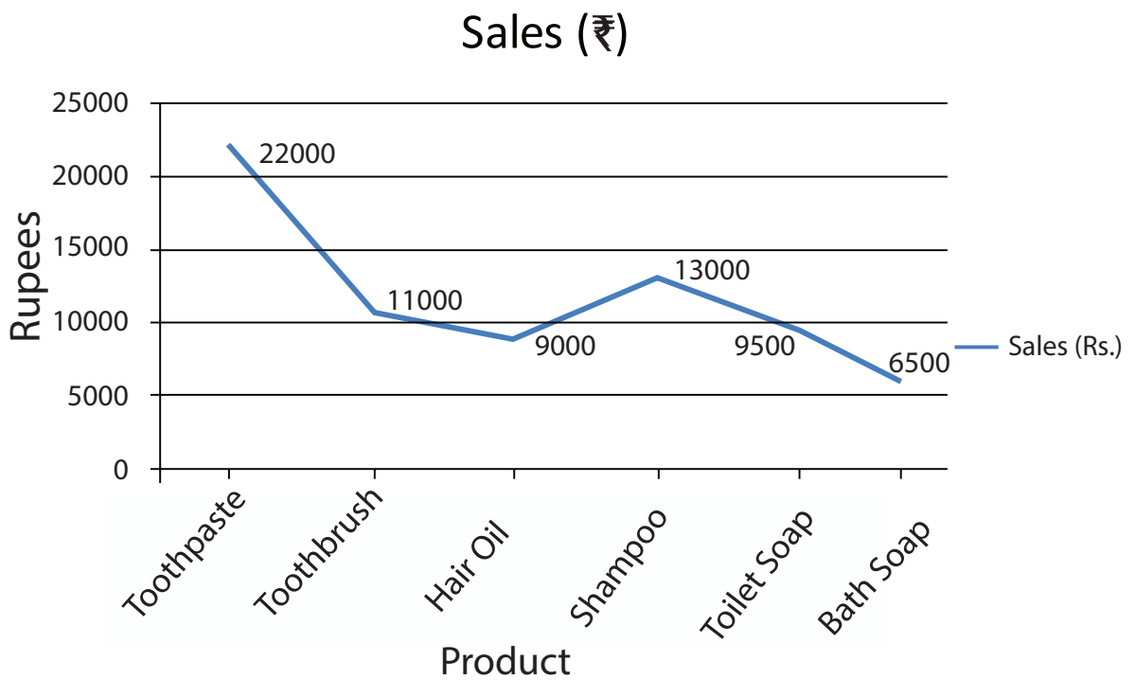


Illustration 11 (Pie Chart)

Sales volume of Moon Ltd during 2017 is given below.
Draw Pie chart.

	A	B	C	D	E	F	G
1	**CITY**	Chennai	Coimbatore	Madurai	Trichy	Tanjore	Tirunelveli
2	**SALES** (₹ in lakhs)	500	350	250	250	200	150

Procedure

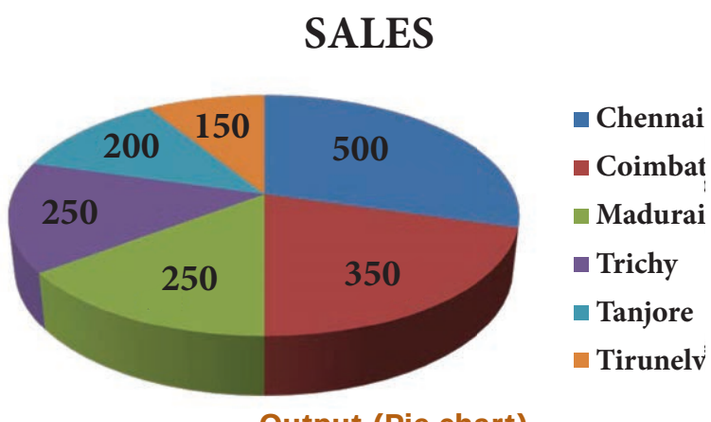
Pie chart

(i) Enter the data given in the table in a new spreadsheet.

(ii) Select the data range from A1 to G2.

(iii) Go to Insert menu and select Pie Chart (3D Type)

(iv) Right click pie chart and select 'Add Data Labels'



Output (Pie chart)

Points to remember

- Computers play a major role in various business activities.
- In accounting computer is commonly used in many areas such as, recording business transactions, payroll accounting etc.
- Accounting softwares are classified as (i) Readymade software, (ii) Customised software and (iii) Tailormade software.
- Few of the software commonly used in business include, MS-office, (Word, Excel etc.), Tally, SAP, Finacle.

Self - examination questions

AU2GGW

I Multiple Choice Questions

Choose the correct answer

1. In accounting, computer is commonly used in the following areas:
   (a) Recording of business transactions
   (b) Payroll accounting
   (c) Stores accounting
   (d) All the above

2. Customised accounting software is suitable for
   (a) Small, conventional business
   (b) Large, medium business
   (c) Large, typical business
   (d) None of the above

3. Which one is not a component of computer system?
   (a) Input unit
   (b) Output unit
   (c) Data
   (d) Central Processing Unit

4. An example of output device is
   (a) Mouse
   (b) Printer
   (c) Scanner
   (d) Keyboard

5. One of the limitations of computerised accounting system is
   (a) System failure
   (b) Accuracy
   (c) Versatility
   (d) Storage

6. Which one of the following is not a method of codification of accounts?
   (a) Access codes
   (b) Sequential codes
   (c) Block codes
   (d) Mnemonic codes

7. TALLY is an example of
   (a) Tailor-made accounting software
   (b) Ready-made accounting software
   (c) In-built accounting software
   (d) Customised accounting software

8. People who write codes and programes are called as
   (a) System analysts
   (b) System designers
   (c) System operators
   (d) System programmers

9. Accounting software is an example of
   (a) System software
   (b) Application software
   (c) Utility software
   (d) Operating software

Answer

1 (d)	2 (b)	3 (c)	4 (b)	5 (a)	6 (a)	7 (b)	8 (d)	9 (b)

II Very short answer questions

1. What is a computer?
2. What is CAS?
3. What is hardware?
4. What is meant by software?
5. What is accounting software?
6. Name any two accounting packages.
7. Give any two examples of readymade software.
8. What is coding?
9. What is grouping of accounts?
10. What are mnemonic codes?

III Short answer questions

1. What are the various types of accounting software?
2. Mention any three limitations of computerised accounting system.
3. State the various types of coding methods.
4. List out the various reports generated by computerised accounting system.
5. State the input and output devices of a computer system.

CASE STUDY

The manager of a medium- sized business is considering the introduction of computerised accounting system. Some staff feels that it is an opportunity to learn new skill. The manager has promised free training for their staff. So, the staff realise that their own skill can be enhanced. Also, there is a demand for highly skilled staff. But, some staff feels threatened by these changes. They feel that they may not be able to learn new skill. Moreover, some of them are nearing their retiring age. So they think that it is not needed for them. But the manager expects the cooperation from all the staff.

Now, discuss on the following points:

- Will it be expensive for the business to introduce computerised accounting system?
- Will everyone get the access to use the computers? In such a case, how to protect data?
- "People at the retirement age are not required to learn new skill" – Do you think so?
- What are the factors to be considered by the managers before introducing CAS?

To explore further

Is it possible to maintain the confidentiality in computerised accounting system? How is it possible?

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GLOSSARY

Account (A/c)	கணக்கு (க/கு)
Accountancy	கணக்குப் பதிவியல்
Accountant	கணக்காளர்
Accounting	கணக்கியல்
Accounting concepts	கணக்கியல் கருத்துகள்
Accounting conventions	கணக்கியல் மரபுகள்
Accounting cycle	கணக்கியல் சுழல்
Accounting equation	கணக்கியல் சமன்பாடு
Accounting principles	கணக்கியல் கோட்பாடுகள்
Accounting standard	கணக்கியல் தரம்
Accounting Standards Board	கணக்கியல் தரக்குழு
Accounting terminologies	கணக்கியல் கலைச்சொற்கள்
Accrued income	பெறவேண்டிய வருமானம்
Adjusted purchases	சரிக்கட்டப்பட்ட கொள்முதல்
Adjusting entries	சரிக்கட்டுப் பதிவுகள்
Amortisation	போக்கெழுதுதல்
Analytical petty cash book	பாகுபடுத்தப்பட்ட சில்லறை ரொக்க ஏடு
Annuity method	ஆண்டுத் தொகை முறை
Artificial person	சட்டமுறை அமைப்புகள்
Assets	சொத்துகள்
Bad debts	வாராக் கடன்
Balance	இருப்பு
Balance b/d	இருப்பு கீ/கொ (கீழ் கொண்டு வரப்பட்டது)
Balance c/d	இருப்பு கீ/இ (கீழ் இறக்கப்பட்டது)
Balance method	இருப்பு முறை
Balance Sheet	இருப்பு நிலைக் குறிப்பு
Balancing	இருப்புக் கட்டுதல்
Bank	வங்கி
Bank overdraft	வங்கி மேல்வரைப் பற்று
Bank pass book	வங்கிச் செல்லேடு
Bank reconciliation statement	வங்கிச் சரிகட்டும் பட்டியல்
Bank statement	வங்கி அறிக்கை
Bank transactions	வங்கி நடவடிக்கைகள்
Barter system	பண்டமாற்று முறை
Bill of exchange	மாற்றுச்சீட்டு
Bills payable	செலுத்தற்குரிய மாற்றுச்சீட்டு
Bills receivable	பெறுதற்குரிய மாற்றுச்சீட்டு
Book keeping	கணக்கேடுகள் பராமரிப்பு
Books of prime entry	முதன்மைப் பதிவு ஏடுகள்

Branches of accounting	கணக்கியல் பிரிவுகள்
Capital	முதல்
Capital expenditure	முதலினச் செலவினம்
Capital receipts	முதலின வரவுகள்
Capital transaction	முதலின நடவடிக்கை
Carriage	தூக்குக் கூலி
Carriage inwards	உள் தூக்குக் கூலி
Carriage outwards	வெளி தூக்குக் கூலி
Cash	ரொக்கம்
Cash book	ரொக்க ஏடு
Cash discount	ரொக்கத் தள்ளுபடி
Cash receipt	ரொக்கச் சீட்டு
Cash transaction	ரொக்க நடவடிக்கை
Cheque	காசோலை
Closing balance	இறுதி இருப்பு
Closing entries	இறுதிப் பதிவுகள்
Closing stock	இறுதிச் சரக்கிருப்பு
Columnar petty cash book	பல பத்திகளுடையச் சில்லறை ரொக்க ஏடு
Company	நிறுமம்
Compensating errors or Offsetting errors	ஈடுசெய் பிழைகள்
Compound journal entry	கூட்டுக் குறிப்பேட்டுப் பதிவு
Computer	கணினி
Computerised accounting	கணினிமயமாக்கப்பட்ட கணக்கியல்
Contra entry	எதிர்ப் பதிவு
Cost accounting	அடக்கவிலைக் கணக்கியல்
Credit	வரவு
Credit balance	வரவு இருப்பு
Credit card	கடன் அட்டை
Credit note	வரவுக் குறிப்பு
Credit side	வரவுப் பக்கம்
Credit transaction	கடன் நடவடிக்கை
Creditor	கடனீந்தோர்
Current account	நடப்புக் கணக்கு
Current asset	நடப்புச் சொத்து
Current liability	நடப்புப் பொறுப்பு
Days of Grace	சலுகை நாட்கள்
Debit	பற்று
Debit balance	பற்று இருப்பு
Debit card	எடுப்பு அட்டை
Debit note	பற்றுக் குறிப்பு
Debit side	பற்றுப் பக்கம்
Debtor	கடனாளி
Deferred revenue expenditure	நீள்பயன் வருவாயினச் செலவு
Depreciation	தேய்மானம்

Discount	தள்ளுபடி
Discounting	தள்ளுபடி செய்தல்
Dishonour	மறுக்கப்படுதல்
Dividend	பங்காதாயம்
Double column cash book	இருபத்தி ரொக்க ஏடு
Double entry system	இரட்டைப் பதிவுமுறை
Drawings	எடுப்புகள்
Error	பிழை
Error of complete omission	முழு விடு பிழை
Error of partial omission	பகுதி விடு பிழை
Errors in accounting	கணக்கியல் பிழைகள்
Errors of recording	பதிவு செய்தல் பிழைகள்
Errors of balancing	இருப்புக் கட்டல் பிழைகள்
Errors of carrying forward	முன் எடுத்து எழுதுதல் பிழைகள்
Errors of casting	கூட்டல் பிழைகள்
Errors of commission	செய் பிழைகள்
Errors of omission	விடு பிழைகள்
Errors of posting	எடுத்தெழுதுதல் பிழைகள்
Errors of principle	விதிப்பிழைகள்
Expenses	செலவுகள்
Fictitious assets	கற்பனைச் சொத்துகள்
Final Accounts	இறுதிக் கணக்குகள்
Financial accounting	நிதிநிலைக் கணக்கியல்
Financial statement	நிதிநிலை அறிக்கை
Fixed assets	நிலைச் சொத்துகள்
Freight	வண்டிக் கட்டணம்
Furniture	அறைகலன்
General reserve	பொதுக் காப்பு
Goods	சரக்கு
Goodwill	நற்பெயர்
Gross profit	மொத்த இலாபம்
Hardware	வன்பொருள்
Human resources accounting	மனிதவளக் கணக்கியல்
Impersonal accounts	ஆள்சாராக் கணக்குகள்
Imprest system	முன்பண மீட்பு முறை
Income	வருமானம்
Income received in advance	முன்கூட்டிப் பெற்ற வருமானம்
Insolvency	நொடிப்பு நிலை
Institute of Chartered Accountants of India	இந்தியப் பட்டயக் கணக்காளர் நிறுவனம்
Insurance	காப்பீடு
Intangible asset	புலனாகாச் சொத்துகள்
Interest	வட்டி
Interest on capital	முதல் மீது வட்டி
Interest on drawings	எடுப்புகள் மீது வட்டி

Interest on investments	முதலீடுகள் மீதான வட்டி
Interest on loan	கடன் மீதான வட்டி
International Accounting Standards Committee	பன்னாட்டு கணக்கியல் தரக்குழு
International Financial Reporting Standards	பன்னாட்டு நிதி அறிக்கை தரநிலைகள்
Investments	முதலீடுகள்
Invoice	இடாப்பு
Journal	குறிப்பேடு
Journal entry	குறிப்பேட்டுப் பதிவு
Journal proper	உரிய குறிப்பேடு
Journalising	குறிப்பேட்டில் பதிவு செய்தல்
Ledger	பேரேடு
Ledger posting	பேரேட்டில் எடுத்தெழுதுதல்
Liabilities	பொறுப்புகள்
Liquidity	நீர்மைத் தன்மை
Long term liabilities	நீண்டகாலப் பொறுப்புகள்
Loss	நட்டம்
Machinery	இயந்திரம்
Management accounting	மேலாண்மைக் கணக்கியல்
Merger	இணைப்பு
Narration	விளக்கக் குறிப்பு
Net profit	நிகர இலாபம்
Nominal Accounts	பெயரளவுக் கணக்குகள்
Opening balance	தொடக்க இருப்பு
Opening entry	தொடக்கப் பதிவு
Opening Stock	தொடக்கச் சரக்கிருப்பு
Outstanding	கொடுபட வேண்டியது
Pay-in-slip	செலுத்துச்சீட்டு
Personal A/c	ஆள்சார் கணக்கு
Petty cash book	சில்லறை ரொக்க ஏடு
Posting	எடுத்தெழுதுதல்
Preliminary expenses	தொடக்கச் செலவுகள்
Premium	முனைமம்
Prepaid	முன் கூட்டிச் செலுத்தியவை
Profit	இலாபம்
Profit and Loss A/c	இலாபநட்டக் கணக்கு
Provision	ஒதுக்கு
Provision for bad and doubtful debts	வாரா ஐயக்கடன் ஒதுக்கு
Provision for discount on debtors	கடனாளிகள் மீதான தள்ளுபடி ஒதுக்கு
Purchase returns / Return outwards	கொள்முதல் திருப்பம் / வெளித் திருப்பம்
Purchases	கொள்முதல்
Purchases book	கொள்முதல் ஏடு
Purchases returns book	கொள்முதல் திருப்ப ஏடு
Real accounts	சொத்துக் கணக்குகள்

Rectification of errors	பிழைகளைத் திருத்துதல்
Rectifying entries	திருத்தப் பதிவுகள்
Rent	வாடகை
Representative personal account	பிரதிநிதித்துவ ஆள்சார் கணக்கு
Reserve	காப்பு
Revenue	வருவாய்
Revenue expenditure	வருவாய்சார் செலவுகள்
Revenue receipts	வருவாய்சார் வரவுகள்
Revenue transactions	வருவாயின நடவடிக்கைகள்
Salary	ஊதியம்
Sale	விற்பனை
Sales book	விற்பனை ஏடு
Sales returns / Returns inwards	விற்பனைத் திருப்பம் / உள்திருப்பம்
Sales returns book	விற்பனைத் திருப்ப ஏடு
Savings account	சேமிப்புக் கணக்கு
Scrap	எறி மதிப்பு
Share	பங்கு
Single column cash book	தனிப்பத்தி ரொக்க ஏடு
Social Responsibility Accounting	சமூகப் பொறுப்புக் கணக்கியல்
Software	மென்பொருள்
Sole proprietor	தனியாள் உரிமையாளர்
Solvency	கடன் தீர்க்கும் திறன்
Source documents	ஆதார ஆவணங்கள்
Stock	சரக்கிருப்பு
Straight line method	நேர்கோட்டு முறை
Subsidiary books	துணை ஏடுகள்
Sundry creditors	பற்பல கடனீந்தோர்
Sundry debtors	பற்பல கடனாளிகள்
Sundry expenses	பற்பல செலவுகள்
Suspense account	அனாமத்துக் கணக்கு
Tangible assets	புலனாகும் சொத்துகள்
Three column cash book	முப்பத்தி ரொக்க ஏடு
Total method	மொத்தத் தொகை முறை
Trade discount	வியாபாரத் தள்ளுபடி
Trading account	வியாபாரக் கணக்கு
Transaction	நடவடிக்கை
Transfer entries	மாற்றுப் பதிவுகள்
Travel expenses	பயணச் செலவுகள்
Trial Balance	இருப்பாய்வு
Voucher	சான்றாவணம்
Wage	கூலி
Written down value	குறைந்து செல் மதிப்பு

Accountancy – Class XI
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