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Lesson-1

ACCOUNTING & ACCOUNTING PRINCIPLES**Accounting**

Almost every organization and individual maintains accounts and deals with accounting. In simple terms, it can be described as a record of Income and expenditure of a business organization, or budget vs. utilization, in the case of a government non-commercial organization. In the case of the business entity, accounting would deal with measuring, recording and communicating the results of business activities. That is why; Accounting is often called “Language of Business”.

Purpose of Accounting

Accounting provides decision-makers with sufficient, relevant information to make prudent and intelligent business decisions. This information is provided through accounting reports called financial statements. The whole process is called “financial reporting”

- The purpose of accounting is to organize the financial details of business.
- To identify the financial transactions.
- To organize the financial data into useful information
- To measure the value of these information in terms of money
- To analyze, interpret, and communicate the information to persons or groups, both inside or outside the business.

Financial Statements Generated by a Business

A business generates four financial statements at the end of its accounting period:-

- i) **Income statement:** shows operational results of business during/over the accounting period.
- ii) **Statement of owners' equity:** showing changes in owner's equity through profit/additional investment or through losses/drawl by owner.
- iii) **Balance sheet** showing financial position at the end of the accounting period i.e. a picture of what the business owns and what it owes.
- iv) **Statement of cash flows** giving a picture of cash inflows (receipts) and cash outflows (payments) over/during the accounting period. It is prepared from the two major financial statements viz Income Statement and Balance Sheet.

Notes to Financial Statements:

In addition to above, notes containing additional information (financial & non-financial) about the business are also attached to financial statements.

Accounting Period

Accounting period is the period of time covered by an Income Statement. It is usually one year. It can either be calendar year (Jan to Dec) or financial year (July to June). Financial Statements are prepared at the end of accounting period and are the end product of accounting process/cycle.

Different Types of Business Organizations

1. Sole Proprietorship

According to D.W.T. Stafford, “It is the simplest form of business organization, which is owned and controlled by one man”

Sole proprietorship is the oldest form of business organization which is owned and controlled by one person. In this business, one man invests his capital himself. He is all in all in doing his business. He enjoys the whole of the profit. The features of sole proprietorship are:

- Easy Formation
- Unlimited Liability
- Ownership
- Profit
- Management
- Easy Dissolution

2. Partnership

According to Partnership Act, 1932, “Partnership is the relation between persons who have agreed to share the profits of a business carried on by all or any of them acting for all.”

Partnership means a lawful business owned by two or more persons. The profit of the business shared by the partners in agreed ratio. The liability of each partner is unlimited. Small and medium size business activities are performed under this organization. It has the following features:

- Legal Entity
- Profit and Loss Distribution
- Unlimited Liability
- Transfer of Rights
- Management
- Number of Partners

3. Joint Stock Company

According to S. E. Thomas, “A company is an incorporated association of persons formed usually for the pursuit of some commercial purposes”

A joint stock company is a voluntary association of persons created by law. It has a separate legal entity apart from its members. It can sue and be sued in its name. In the joint stock company, the work of organization begins before its incorporation by promoters and it continues after incorporation. The joint stock company has the following feature:

- Creation of Law

- Separate Legal Entity
- Limited Liability
- Transferability of shares
- Number of Members
- Common Seal

Generally Accepted Accounting Principles (GAAP)

These are 'Ground rules' i.e. Principles for preparing financial statements. These are constantly evolving. These embody accounting concepts, measurement techniques and standards of presentation of financial statements. These Accounting Principles enable comparability between various enterprises and of the operational performance of the same enterprise over many years. These give reliability to Financial Statements.

Following are some of the Generally Accepted Accounting Principles:

- i) **Entity principle:** specific business entity separate from personal affairs of the owner(s).
- ii) **Cost principle:** valuation and recording of assets at cost.
- iii) **Going-concern assumption:** connected with cost principle, assets acquired for use and not for resale.
- iv) **Objectivity principle:** definite, factual basis for assets valuation; measuring transactions objectively.
- v) **Stable currency principle.** The currency remains more or less stable and rate of inflation is almost zero.
- vi) **Adequate disclosure concept:** facts necessary for proper interpretation of statements; "subsequent events", lawsuits against the business, assets pledged as securities/collaterals, contingent liabilities etc; reflected in Notes.

ACCOUNTING EQUATION

ASSETS = LIABILITIES + OWNER'S EQUITY

Balance Sheet is based on Accounting Equation. It is in fact, a detailed statement of the Equation. The Equation in a way shows, utilization of Funds and Sources of Funds. In other words, it shows what a business OWNS and what it OWES. Alternately, the Accounting Equation or Balance Sheet is a description of Total Assets of a business against the claimants of these Assets. Therefore, this Equation shows financial position on a specific date. The three titles in the Equation are Elements of Balance Sheet. Similarly Elements of Income Statement would be Revenues & Expenses and their net affects Owner's equity.

Within the Elements, there would be sub-elements, for example, the Element or Account "Assets" would consist of cash, Accounts Receivable, Land, and Building etc. Each financial transaction affects two or more elements or sub-elements of the Accounting Equation. Therefore, we can say that each financial transaction affects Balance Sheet i.e. financial position of the business. This would be clear from the following illustration.

Khizr property dealer:

The proprietor starts business with deposit of Rs.180, 000. On July 1, 2006

Financial Position as on July 1, 2006

		Assets (Rs)	Owner's equity (Rs)
i)	Deposit in business by proprietor/owner.	Cash 180,000	Khizr, Capital 180,000

Jul 3, 06

Land Valuing Rs. 141, 000 is purchased for cash on July 3.

Financial Position on that date would be

II) Purchase of land for cash (Rs.141,000)	Cash	39,000	Khizr, Capital	180, 000
	Land	141,000		
	Total assets	180,000	Total owner's equity	180,000
	(Cash is reduced by Rs.141, 000, but correspondingly a new asset land has come up)			

Jul 5, 06

III) Purchase of building for (Rs.36,000) partly on cash Rs.15,000) and partly on credit (Rs.21,000)	Cash	24,000	Liabilities & Owner's equity	
	Land	141,000	Accounts/Notespayable	21,000
	Building	36,000	Owner's equity	180,000
	Total assets	2,01,000	Total	201,000

Rs.15, 000 is paid in cash for the building which further reduces cash from Rs.39, 000 to Rs.24, 000. For remaining amount of Rs.21, 000, a liability in the form of accounts or notes payable involve interest, where as accounts payable are without interest.

July 10, 2006: A part of land valuing Rs.11, 000 was sold on credit. A new asset "Accounts Receivable" has been introduced. The new financial position as a result of this transaction would be:

iv)	Sale of part of land on credit for Rs.11,000	Cash	24,000	Accounts Payable	21,000
		Accounts Receivable	11,000	Owner's equity	180,000
		Land	130,000		
		Building	36,000		
		Total	201,000		201,000

July 14, 2006: Office equipment for Rs.5400/- was purchased on credit. A new liability of Rs.5400 has accrued, raising Accounts Payable from Rs.21, 000 to Rs.26, 400.

v)	Purchase of Office Equipment for Rs.5400 on credit.	Cash	24,000	A/C Payable	26,400
		A/Cs Receivable	11,000	Owner's equity	180,000
		Land	130,000		
		Building	36,000		
		Office equipment	5,400		
		Total	206,400		206,400

July 20, 2006. Accounts receivable which were Rs.11, 000 on July 14, have been converted into cash to the extent of Rs.1, 500. Cash has therefore increased from Rs.24, 000 to Rs.25, 500 and accounts receivable have correspondingly decreased to Rs.9, 500

(VI)	Partial collection of	Cash	25,500	A/Cs payable	26,400
	Accounts (Rs.15,00)	A/C receivable	9,500	owner's equity	180,000
		Land	130,000		
		Building	36,000		
		Office equipment	5,400		
		Total	206,400	Total	206400

July 31, 2006

(VII)	Payment of liability	Cash	22,500	A/Cs payable	23,400
	(A/C payable) Rs.3,000	A/C receivable	9,500	owner's equity	180,000
		Land	130,000		
		Building	36,000		
		Office equipment	5,400		
		Total	203,400	Total	2,03,400

It is thus clear from the above illustration that each financial transaction affects financial position, (which in effect is the balance sheet). Accounting period in the example was one month. It must also be noted no business activity (commissions/ fees/ Revenues & Expenses) was involved in above example. Only setting up of business was involved and therefore owner's equity remains the same.

Lesson-2

ACCOUNT AND ACCOUNTING CYCLE/PROCESS**Account**

An accounting system keeps separate record of each item like assets, liabilities, etc. For example, a separate record is kept for cash that shows increase and decrease in it.

This record that summarizes movement in an individual item is called an Account.

Each element/sub-element of the balance sheet is named as “**Account**”, having three parts viz title, left side (Debit or Dr) and a right side (Credit or Cr). Technically, these are also called ‘Ledger Accounts’. The same is true of Income Statement, which would be discussed later.

The Ledger Accounts are also called T-account, because these are in the shape of the alphabet ‘T’ as shown below:-

Dr	Title	Cr
	!	
	!	
	!	
	!	

Account Payable: An amount owed to a supplier for good or services purchased on credit; payment is due within a short time period, usually 30 days or less.

Notes Payable: A liability expressed by a written promise to make a future payment at a specific time, OR are obligations (short term debt) evidenced by a promissory note? The proceeds of the note are used to purchase current assets (inventory & receivables).

Dual Aspect of Transactions

For every debit there is an equal credit. This is also called the *dual aspect of the transaction* i.e. every transaction has two aspects, debit and credit and they are always equal. This means that every transaction should have two-sided effect. For example Mr. A starts his business and he initially invests Rupees 100,000/- in cash for his business. Out of this cash following items are purchased in cash;

- A building for Rupees 50,000/-;
- Furniture for Rupees 10,000/-; and
- A vehicle for Rupees 15,000/-

This means that he has spent a total of Rupees 75,000/- and has left with Rupees 25,000 cash. We will apply the Dual Aspect Concept on these events from the viewpoint of business.

When Mr. A invested Rupees 100,000/-, the cash account benefited from him. The event will be recorded in the books of business as,

Debit	Cash	Rs.100, 000
Credit	Mr. A	Rs.100, 000

Analyse the transaction. The account that received the benefit, in this case is the cash account, and the account that provided the benefit is that of Mr. A.

- Building purchased – The building account benefited from cash account

Debit	Building	Rs.50, 000	
Credit	Cash		Rs.50, 000

- Furniture purchased – The furniture account benefited from cash account

Debit	Furniture	Rs.10, 000	
Credit	Cash		Rs.10, 000

- Vehicle purchased – The vehicle account benefited from cash account

Debit	Vehicle	Rs.15, 000	
Credit	Cash		Rs.15, 000

Basic Principle of Double Entry

We can devise the basic principle of double entry book-keeping from our discussion to this point “Every Debit has a Credit” which means that “All Debits are always equal to All Credits”.

Assets

Assets are the **properties and possessions of the business**.

Properties and possessions can be of two types:

- **Tangible Assets** that have physical existence (are further divided into Fixed Assets and Current Assets)
- **Intangible Assets** that have no physical existence

Examples of both are as follows:

- Tangible Assets – Furniture, Vehicle etc.
- Intangible Assets – Right to receive money, Good will etc.

Accounting Equation

From the above example, if the debits and credits are added up, the situation will be as follows:

Debits

Cash	Rs.100, 000/-
Building	50,000/-
Furniture	10,000/-
Vehicle	15,000/-

Credits

Mr. A	Rs.100, 000/-
Cash	75,000/-

The total Equation becomes:

DEBITS	=	CREDITS
Cash + Building + Furniture + Vehicle	=	Cash + Mr. A
100000 + 50000 + 10000 + 15000	=	75000 + 75000

Cash on Left Hand Side is Rupees 100,000/- and on Right Hand Side it is Rs.75, 000/-. If it is gathered on the Left Hand Side it will give a positive figure of Rupees 25,000/- (which you will notice is our balance of cash in hand). Now the equation becomes:

DEBITS	=	CREDITS
Cash + Building + Furniture + Vehicle	=	Mr. A
25,000 + 50,000 + 10,000 + 15,000	=	100,000

Keeping the entity concept in mind we can see that the business owns the building, furniture, vehicle and cash and will obtain benefit from these things in future. Any thing that provides benefit to the business in future is called '**Asset**'. Similarly the business had obtained the money from Mr. A and this money will have to be returned in form of either cash or benefits. Any thing for which the business has to repay in any form is called '**Liability**'. So cash, building, furniture and vehicle are the assets of the business and the amount received from Mr. A for which the business will have to provide a return or benefit is the liability of the business. Therefore, our equation becomes:

$$\text{Assets} = \text{Liabilities}$$

The liabilities of the business can be classified into two major classes i.e. the amounts payable to 'outsiders' and those payable to the 'owners'. The liability of the business towards its owners is called '**Capital**' and amount payable to outsiders is called **liability**. Therefore, our accounting equation finally becomes:

$$\text{Assets} = \text{Capital} + \text{Liabilities}$$

Business or Commercial Accounts are based upon Double entry accounting involving Debit and credit entries. Rule for Dr. & Cr entries to record changes in balance sheet Accounts or Accounting Equation is: increase in assets are debited (since Assets are on left side of Accounting Equation) and increase in liabilities and Owner's Equity are credited because these are on the right side of Accounting Equation. Correspondingly, decrease in Assets is credited and decrease in liabilities and Owners Equity are debited.

$$\text{Dr} + \uparrow \text{Assets} = \text{Liabilities} + \text{Owner's equity}$$

$$\text{Cr} \downarrow _ \text{Cr} \uparrow + \downarrow _ \text{Dr} \uparrow + \text{Cr} \downarrow _ \text{Dr}.$$

Rule for Income Statement items is that Revenues are credited and expenses are debited. The basis of this rule is that income statement shows the effect of Revenues & Expenses on owner's equity. Difference of Revenues and Expenses causes difference in owner's equity. Since Revenues increase owner's equity, these are credited. Correspondingly, since expenses ultimately reduce owner's equity, these are debited.

It would thus be seen that normal balances in Assets Accounts would be debit and those in Liability and Owner's Equity Accounts would be credit. Orderly arrangement of Accounts is to be maintained. Numbering of Accounts is also done to facilitate proper record-keeping and cross-references. When the

business is large, a Chart of Accounts is maintained which lists the various Accounts giving details of their titles and numbers.

Compound Entry. A journal entry that has more than one debit or credit entry.

General Journal

Date	Account Title and explanation	LP	Dr.	Cr.
July, 2006 (1)	Cash	1	180,000	
	Khizr, Capital (Owner invested cash in business)	50		180,000
July, 2006 (5)	Building		36,000	
	Cash Accounts payable (Purchase building partly for cash and Partly on credit)			15,000 21,000

“LP” is reference account No: of the particular ledger accounts. For example cash account has been assigned number 1 in ledger and capital account is given number 50.

C) Posting in ledger which mean transferring debits and credits from journal to ledger account. This is also called ledgerising or classification

Date	Explanation	Ref	Dr.	Cr.
Jul 1		1	180,000	
	Khizr	1	Capital	Account No:50
Jul 1				
				180,000

“Ref” is reference to the page of journal i.e. page 1. This shows that there is cross-reference between journal and ledger through “LP” and “ref” columns in journal and ledger respectively.

Lesson-3

ACCOUNTING CYCLE/PROCESS
(Continued)***Rules of Debit and Credit**

From our discussion up to this point, we have established following rules for Debit and Credit:

Any account that obtains a benefit is Debit.

OR

Anything that will provide benefit to the business is Debit.

Both these statements may look different but in fact if we consider that whenever an account benefits as a result of a transaction, it will have to return that benefit to the business then both the statements will look like different sides of the same picture.

For credit,

Any account that provides a benefit is **Credit**.

OR

Anything to which the business has a responsibility to return a benefit in future is **Credit**.

As explained in the case of Debit, whenever an account provides benefit to the business the business will have a responsibility to return that benefit at some time in future and so it is Credit.

***Rules of Debit and Credit for Assets**

Similarly we have established that whenever a business transfers a value / benefit to an account and as a result creates some thing that will provide future benefit; the 'thing' is termed as **Asset**. By combining both these rules we can devise following rules of Debit and Credit for Assets:

- When an asset is created or purchased, value / benefit is transferred to that account, so it is Debited

I. Increase in Asset is Debit

- Reversing the above situation if the asset is sold, which is termed as disposing off, for say cash, the asset account provides benefit to the cash account. Therefore, the asset account is Credited

II. Decrease in Asset is Credit***Rules of Debit and Credit for Liabilities**

Anything that transfers value to the business, and in turn creates a responsibility on part of the business to return a benefit, is a **Liability**. Therefore, liabilities are the exact opposite of the assets.

- When a liability is created the benefit is provided to business by that account so it is Credited

III. Increase in Liability is Credit

- When the business returns the benefit or repays the liability, the liability account benefits from the business. So it is Debited

IV. Decrease in Liability is Debit***Rules of Debit and Credit for Expenses**

Just like assets, we have to pay for expenses. From assets, we draw benefit for a long time whereas the benefit from expenses is for a short run. Therefore, Expenditure is just like Asset but for a short run.

Using our rule for Debit and Credit, when we pay cash for any expense that expense account benefits from cash, therefore, it is debited.

- Now we can lay down our rule for Expenditure:

V. Increase in Expenditure is Debit

- Reversing the above situation, if we return any item that we had purchased, we will receive cash in return. Cash account will receive benefit from that Expenditure account. Therefore, Expenditure account will be credited

VI. Decrease in Expenditure is Credit***Rules of Debit and Credit for Income**

Income accounts are exactly opposite to expense accounts just as liabilities are opposite to that of assets. Therefore, using the same principle we can draw our rules of Debit and Credit for Income

VII. Increase in Income is Credit**VIII. Decrease in Income is Debit**

Khizr introduced a capital of Rs.180,000 in his business

Date	Explanation	Ref	Dr.	Cr.
2006				
1-Jul	Cash Account	1	180,000	
	Khizr, Capital	1		180,000

Purchased land for cash for Rs.141,000

Date	Explanation	Ref	Dr.	Cr.
3-Jul	Land Account		141,000	
	Cash Account			141,000
	Purchased Land for Rs.			
	141,000			

Purchase of building partly on cash (Rs.15,000) and partly on credit (Rs.21,000)

Date	Explanation	Ref	Dr.	Cr.
5-Jul	Building Account		36,000	
	Cash Account			15,000
	Accounts Payables			21,000

Sale of part of land on credit for Rs.11,000

Date	Explanation	Ref	Dr.	Cr.
10-Jul	Accounts receivables		11,000	
	Land Account			11,000
	Sold a portion of land			
	for Rs. 11,000.			

Purchase of Office Equipment for Rs.5400 on credit

Date	Explanation	Ref	Dr.	Cr.
14-Jul	Office equipment		5,400	
	Accounts Payables			5,400
	Purchased Equipment			
	on credit			

Partial collection of Accounts Rs.1500

Date	Explanation	Ref	Dr.	Cr.
20-Jul	Cash account		1,500	
	Accounts receivables			1,500
	Collection of accounts receivables			

Payment of liability (A/C Payable) Rs.3, 000.

Date	Explanation	Ref	Dr.	Cr.
31-Jul	Accounts payables		3,000	
	Cash account			3,000
	Payment of liability			

Khizr Limited**General Journal****For the month of July 2006**

Date	Description	L/F	Dr.	Cr.
1-Jul	Cash Account		180,000	
	Khizr, Capital			180,000
	Capital Invested by owner			
3-Jul	Land Account		141,000	
	Cash Account			141,000
	Purchased Land for Rs. 141,000			
5-Jul	Building Account		36,000	
	Cash Account			15,000
	Accounts Payables			21,000
	Purchased Building partly for cash and partly on credit			
10-Jul	Accounts receivables		11,000	
	Land Account			11,000
	Sold a portion of land for Rs. 11,000.			
14-Jul	Office equipment		5,400	
	Accounts Payables			5,400
	Purchased Equipment on credit			
20-Jul	Cash account		1,500	
	Accounts receivables			1,500
	Collection of accounts receivables			
31-Jul	Accounts payables		3,000	
	Cash account			3,000
	Payment of liability			

Lesson-4

ACCOUNTING CYCLE/PROCESS (Continued)

Accounting Cycle/Process

It mainly consists of Recording, Classifying and Summarizing financial transactions over an accounting period.

Steps in Accounting Cycle

- a) **Analyzing financial transaction.** The purpose is to see which two (or more) Accounts (or sub-Accounts) are affected by a particular financial transaction.
- b) **Recording** (chronologically) in journal which is called “book of original entry”. this step is also called journalizing. Its practical illustration is given below.
- c) **Posting** in ledger which means transferring debits and credits from journal to ledger account. This is also called ledgerising or classification.
- d) **Preparing trial balance**, this is done to prove the equality of debits and credits in the ledger
- e) **Making adjusting Entries**

Compound Entry. A journal entry that has more than one debit or credit entry.

General Journal

Date	Account Title and explanation	LP	Dr.	Cr.
July, 2006 (1)	Cash Khizr, Capital (Owner invested cash in business)	1 50	180,000	180,000
July, 2006 (5)	Building Cash Accounts payable (Purchase building partly for cash and Partly on credit)		36,000	15,000 21,000

“LP” is reference account No: of the particular ledger accounts. For example cash account has been assigned number 1 in ledger and capital account is given number 50.

C) Posting in ledger which mean transferring debits and credits from journal to ledger account. This is also called ledgerising or classification

Date	Explanation	Ref	Dr.	Cr.
1-Jul		1	180,000	
	Khizr	1	Capital	Account No:50
1-Jul				
				180,000

“Ref” is reference to the page of journal i.e. page 1. This shows that there is cross-reference between journal and ledger through “LP” and “ref” columns in journal and ledger respectively.

Cash Ledger Account

Date	Particulars	L/F	Debit	Date	Particulars	L/F	Credit
1stJuly	Owners		180,000	3rd July	Land		141,000
	Equity						
20th July	Accounts		1,500	5th July	Building		15,000
	Receivables						
				31st Jul	A/P		3,000
				31st July	Balance c/f		22,500
	Total		181,500		Total		181,500

Building Account

Date	Particulars	L/F	Debit	Date	Particulars	L/F	Credit
5th July	Cash Account		15,000				
5th July	A/P		21,000				
				31st July	Balance c/f		36,000
	Total		36,000		Total		36,000

Office Equipment Account

Date	Particulars	L/F	Debit	Date	Particulars	L/F	Credit
14-Jul	A/P		5,400				
				31st July	Balance c/f		5,400
	Total		5,400		Total		5,400

Accounts Payable

Date	Particulars	L/F	Debit	Date	Particulars	L/F	Credit
31st July	Cash		3,000	5th Jul	Building		21,000
				14th July	Equipment		5,400
31st July	Balance c/f		23,400				
	Total		26,400		Total		26,400

Land Account

Date	Particulars	L/F	Debit	Date	Particulars	L/F	Credit
3rd July	Cash		141,000	10th July	A/R		11,000
				31st July	Balance c/f		130,000

	Total		141,000		Total		141,000
Accounts Receivable							
Date	Particulars	L/F	Debit	Date	Particulars	L/F	Credit
10th July	Land		11,000	20th July	Cash		1,500
				31st July	Balance c/f		9,500
	Total		11,000		Total		11,000
Owner's Equity Account							
Date	Particulars	L/F	Debit	Date	Particulars	L/F	Credit
				1st July	Cash		180,000
31st July	Balance c/f		180,000				
	Total		180,000		Total		180,000

d) Preparing Trial balance:

This is done to prove the equality of debits and credits in the ledger.

**KHIZR PROPERTY DEALER
TRIAL BALANCE
JULY 31, 2006**

	Dr.	Cr.
	Rs.	Rs.
Cash	22,500	
Accounts Receivable	9,500	
Land	130,000	
Building	36,000	
Office Equipment	5,400	
Accounts Payable		23,400
Khizr ,capital (Owner's equity)		180,000
	203,400	203,400

It is prepared in the order of Accounting Equation i.e. balance sheet. It serves as a working paper for accountants. It should however be noted that it gives assurance only as to equality of debit and credit amounts. It does not assure accuracy. For example if a transaction is altogether omitted from accounting records, debits and credits of other transactions so recorded would be equal, but this particular transaction which was omitted altogether, would not be detected by Trial balance.

- At the end of accounting period, a list of all ledger balances is prepared. This list is called trial Balance.

Trial balance is a listing of the accounts in your general ledger and their balances as of a specified date. A trial balance is usually prepared at the end of an accounting period and is used to see if additional adjustments are required to any of the balances. Since the basic accounting system relies on double-entry bookkeeping, a trial balance will have the same total debit amount as it has total credit amounts.

- Both sides of trial balance i.e. Debit side and credit side must be equal. If both sides are not equal, there are some errors in the books of accounts.
- Trial balance shows the mathematical accuracy of the books of accounts.

Limitations of Trial Balance

1. Trial balance only shows the mathematical accuracy of the accounts.
2. If both sides of trial balance are equal, books of accounts are considered to be correct. But this might not be true in all the cases.
3. If any transaction is not recorded at all, trial balance can not detect the omitted transaction.
 - If any transaction is recorded in the wrong head e.g. if an expense is debited to an assets account. Trial balance will not be able to detect that mistake too

ACCOUNTING CYCLE/PROCESS

Preparing Balance Sheet from Trial Balance: We have assumed that the first month i.e. July was taken up in setting up of the business and no business activity as such took place in this month. It means there were no Revenues & Expenses and hence no Income Statement. Preparing Balance Sheet from Trial balance: involves re-arranging of items or Accounts in the Trial Balance. What is done is that Assets are taken on the left side and liabilities and owner's equity on the right. This is the Account Form of Balance Sheet. Alternate form is Report Form in which Assets are written above and liabilities and owner's equity are written below.

Balance Sheet Khizr Property dealer For the month of July 2006

Assets	Rs.	Liabilities & Owner's Equity	Rs.
Cash	22,500	Accounts Payable	23,400
Accounts Receivable	9,500	Khizr, Capital (owner's equity)	180,000
Land	130,000		
Building	36,000		
Office Equipment	5,400		
Total	203,400	Total	203,400

It is to be seen that each of the 7 transactions during July, changed the Accounting Equation, and hence each gave rise to new balance sheet. The question may arise as to why make journal & ledger entries. The answer is that we have to have reasonable time-period at the end of which balance sheet may

be prepared. This time-period is Accounting Period which is usually one year. And during this period individual transactions occurring daily are journalized and ledgerised i.e. posted in ledgers.

Assets are economic resources that are owned by a business and are expected to benefit future operations. In most cases, the benefit to future operations comes in the form of positive future cash flows. The positive future cash flows may come directly as the asset is converted into cash (collection of a receivables) or indirectly as the asset is used in operating the business to create other assets that result in positive future cash flows (building & land used to manufacture a product for sale). Assets may have definite physical form such as building, machinery or stock. On the other hand, some assets exist not in physical or tangible form, but in the form of valuable legal claims or right. Examples are accounts receivables, investment in govt. bonds and patent rights etc.

Liabilities are debts and obligations of the business. The person or organization to which the debt is owed is called **creditors**. All businesses have liabilities; even the most successful companies' purchase stocks, supplies and receive services on credit. The liabilities arising from such purchases are called **Accounts payable**.

Rule of Debit and Credit for Assets and Liabilities

Assets (increase in assets is debit and decrease in asset is credit)

Liabilities (Increase in liability is credit and decrease in liability is debit)

Classification of Assets:

There are two types of assets:

1. **Tangible Assets** which have physical existence and can be seen or touched. It includes Fixed as well as Current assets.
2. **Intangible assets** which have no physical existence like goodwill, patents and copyrights etc.
 - **Fixed Assets** – Are the assets of permanent nature that a business acquires, such as plant, machinery, building, furniture, vehicles etc. Fixed assets are subject to depreciation.
 - **Long Term Assets** –These are the assets of the business that are receivable after twelve months of the balance sheet date. For example, if business has invested some money for two years in any saving scheme or has purchased saving certificates for more than one year, it is a long term asset.
 - **Current Assets** – Are the receivables that are expected to be received within one year of the balance sheet date. Debtors, closing stock & all accrued incomes are the examples of Current Assets because these are expected to be received within one accounting period from the balance sheet date.

The year, in which long term asset is expected to be received, long term asset is transferred to current assets in that year.

Classification of Liabilities

Capital – is the funds invested by the owners of the business. Business has a liability to return these funds to the owner. We know that for the purpose of accounting, business is treated separately from its owners. This is known as Separate Entity Concept i.e. Business is a separate entity. Therefore, if the

owner gives something (can be in form of Cash or Some other Asset) to the business then the business, not only has to return the amount to the owner but it also has to give some return on that money. That is why we treat Capital (Owners Funds) as a Liability.

Profit & Loss Account – The net balance of the profit and loss account i.e. either profit or loss also belongs to the owners.

While explaining capital we said that the business has to give return to the owners. Now if the business is managed successfully, then this return would be a Favorable figure (Profit). This return will, therefore, be added to the Owners' investment.

On the other hand, if the business is not managed successfully then this return would be an un-favorable figure (Loss). It will, therefore, be deducted from the Owners' Investment.

- **Long Term Liabilities** – These are the liabilities that will become payable after a period of more than one year of the balance sheet date. For example, if business has taken a loan from bank or any third person and it is payable after three years, it will be treated as a long term liability for the business.
- **Current Liabilities** – These are the obligations of the business that are payable within twelve months of the balance sheet date. Creditors and all accrued expenses are the examples of current liabilities of the business because business is expected to pay these back within one accounting period.

The year in which long term liability is to be paid back, long term liability is transferred to current liability in that year.

Balance Sheet

It is a position statement that shows the standing of the organization in Monetary Terms at a Specific Time.

Unlike Profit and Loss that shows the performance of the entity over a period of time, the Balance Sheet shows the Financial State of Affairs of the entity at a given date. Balance sheet is the summarized analysis in a 'T' form of all assets and liabilities of the entity, with liabilities listed on left hand side and assets on right hand side. Asset is any owned physical object (tangible asset) or a right (intangible asset) having economic value to the owner. Liability is an obligation of the business to deliver goods or to provide a benefit in future.

Format of Balance Sheet (Account Form)

Name of the Entity Balance Sheet As At-----			
Liabilities	Amount Rs.	Assets	Amount Rs.
Capital 100000		Fixes Assets	75000
	115000	Long Term Assets	20000
Add Profit and loss Account 15000	50000	Current assets	80000
Long Term Liabilities	10000		

Current liabilities			
Total	175000	Total	175000

Format of Balance Sheet (Report Form)

Name of the Entity Balance Sheet As At-----		
PARTICULARS	Amount Rs.	Amount Rs.
ASSETS		
Fixes Assets		75000
Long Term Assets		20000
Current Assets		80000
Total		175000
LIABILITIES		
Capital	100000	115000
Profit	15000	
Long Term Liabilities		50000
Current Liabilities		10000
Total		175000

Illustration # 1

The following is the Trial Balance extracted from the books of Naeem & Sons as on 30/06/2007. Prepare a profit & loss account & balance sheet for the year ended June 30, 2007.

Particulars	Dr.	Cr.
Sales		100,000
Purchases	45,000	
purchase return		3,000
Salaries	12,000	
Rent	5,000	
Debtors	25,000	
Creditors		16,000
Capital		368,000
Plant & machinery	400,000	
Grand Total	487,000	487,000

Financial Statements

- Different reports generated from the books of accounts to provide information to the relevant persons.
- Every business is carried out to make profit. If it is not run successfully, it will sustain loss. The calculation of such profit & loss is probably the most important objective of the accounting function. Such information is acquired from “Financial Statements”.
- Financial Statements are the end product of the whole accounting process. These show us the profitability of the business concern and the financial position of the entity at a specified date.
- The most commonly used Financial Statements are ‘profit & loss account’ ‘balance sheet’ & ‘cash flow statement’.

Income & Expenditure Vs Profit & Loss Account

- Income and Expenditure Account is used for Non-Profit Organizations like Trusts, NGOs while
- Profit and Loss Account is used for Commercial organizations like limited companies.

Profit & Loss Account

- Profit & Loss account is an account that summarizes the profitability of the organization for a specific accounting period.
- Profit & Loss account has two parts:
 - First part is called **Trading account** in which Gross Profit is calculated. Gross profit is the excess of sales over cost of goods sold in an accounting period. In trading concern, cost of goods sold is the cost of goods consumed plus any other charge paid in bringing the goods in salable condition. For example, if business purchased certain items for resale purpose and any expense is paid in respect of carriage or bringing the goods in store (transportation charges). These will also be grouped under the heading of ‘cost of goods sold’ and will become part of its price. In manufacturing concern, cost of goods sold comprises of purchase of raw material plus wages paid to staff employed for converting this raw material into finished goods plus any other expense in this connection.
 - 2nd part is called **Profit & Loss account** in which Net Profit is calculated. **Net Profit** is what is left of the gross profit after deducting all other expenses of the organization in a specific time period.

How to prepare Profit & Loss Account?

- One way is to write down all the Debit and Credit entries of Income and Expense accounts in the Profit and Loss Account. But it is not sensible to do so.
- The other way is that we calculate the net balance or we can say Closing Balance of each income and expense account. Then we note all the credit balances on the credit side and all the debit balances on the debit of profit and loss account.
- If the net balance of profit and loss is Credit (credit side is greater than debit side) it is Profit and if the net balance is Debit (Debit side is greater than credit side) it is a loss.

Income, Expenditure, And Profit & Loss

- **Income** is the value of goods and services earned from the operation of the business. It includes both cash & credit. For example, if a business entity deals in garments. What it earns from the

sale of garments, is its income. If somebody is rendering services, what he earned from rendering services is his income.

- **Expenses** are the resources and the efforts made to earn the income, translated in monetary terms. It includes both expenses, i.e., paid and to be paid (payable). Consider the above mentioned example, if any sum is spent in running the garments business effectively or in provision of services, is termed as expense.
- **Profit** is the excess of income over expenses in a specified accounting period.

$$\text{Profit} = \text{Income} - \text{expenses}$$

In the above mentioned example, if the business or the services provider earn Rs. 100,000 & their expenses are Rs. 75,000. Their profit will be Rs. 25,000 (100,000-75,000).

- **Loss** is the excess of expenses over income in a specified period of time. In the above example, if their expenses are Rs. 100,000 & their income is Rs. 75,000. Their loss will be Rs. 25,000.

Rules of Debit & Credit

- Increase in expense is Debit (Dr.)
- Decrease in expense is credit (Cr.)
- Increase in income is credit (Cr.)
- Decrease in income is Debit (Dr.)

Classification of Expenses

- It has already been mentioned that a separate account is opened for each type of expense. Therefore, in large business concerns, there may be a large number of accounts in organization's books
- . As profit & loss account is a summarized record of the profitability of the organization. So, similar accounts should be grouped for reporting purposes.
- The most commonly used groupings of expenses are as follows:
 - Cost of goods sold
 - Administration expenses
 - Selling expenses
 - Financial expenses
- **Cost of goods sold (CGS)** is the cost incurred in purchasing or manufacturing the product, which an organization is selling plus any other expense incurred in bringing the product in saleable condition. Cost of goods sold contains the following heads of accounts:
 - Purchase of raw material/goods
 - Wages paid to employees for manufacturing of goods
 - Any tax/freight is paid on purchases
 - Any expense incurred on carriage/transportation of purchased items.
- **Administrative expenses** are the expenses incurred in running a business effectively. Main components of this group are:
 - Payment of utility bills
 - Payment of rent
 - Salaries of employees
 - General office expenses

- Repair & maintenance of office equipment & vehicles.
- **Selling expenses** are the expenses incurred directly in connection with the sale of goods. This head contains:
 - Transportation/carriage of goods sold
 - Tax/freight paid on sale
 - If the expense head 'salaries' includes salaries of sales staff then it will be excluded from salaries & appear under the heading of 'selling expenses'.
- **Financial expenses** are the interest paid on bank loan & charges deducted by bank on entity's bank accounts. It includes:
 - Mark up on loan
 - Bank charges

Receipt & Payment Account

A receipt & payment account is the summarized record of actual cash receipts and actual cash payment of the organization for a given period of time. This is a report that provides cash movement during the reported period. In other words, it can be defined as the summarized record of the cash book for a specific period.

Receipt & Payment Vs Profit & Loss Account

- Receipt & payment account is the summarized record of actual cash receipts and actual cash payment during the period while profit & loss account also includes Receivable and Payable.
- **Income & Expenditure Vs Profit & Loss Account**
- These are two similar terms. Only difference between these two terms is that income & expenditure account is prepared for non profit oriented organizations, e.g. Trusts, NGO's, whereas profit & loss account is prepared in profit oriented organizations, e.g. Limited companies, Partnership firms etc.
- In case of Income and Expenditure account, Surplus/Deficit is to be find and in case of Profit and loss account, profit or loss is to be found.

Lesson-5

PREPARING FINANCIAL STATEMENTS AND NOTES**A sample of Profit and Loss Account**

Name of the Entity
Profit and Loss Account
For the period Ending ----

DEBIT		CREDIT	
PARTICULARS	AMOUNT Rs.	PARTICULARS	AMOUNT Rs.
Cost of sale	60,000	Income	100,000
Gross profit c/d (Income – cost of sales)	40,000		
Total	100,000	Total	100,000
Admin expenses	15,000	Gross profit b/d	40,000
Selling expenses	5,000		
Financial expenses	5,000		
Net profit (Gross profit – expenses)	15,000		
Total	40.000	Total	40.000

Calculations of Gross profit and Net profit

$$\begin{aligned}\text{Gross profit} &= \text{Income} - \text{cost of sales} \\ &= 100000 - 60000 \\ &= 40000\end{aligned}$$

$$\begin{aligned}\text{Net profit} &= \text{Gross profit} - \text{Expenses} \\ &= 40000 - (15000 + 5000 + 5000) \\ &= 15000\end{aligned}$$

A sample of Income Statement

Name of the Entity
Income statement
For the period Ending ----

PARTICULARS	AMOUNT Rs.	AMOUNT Rs
Income/Sales/Revenue		100000
Less: Cost of sales		(60000)
Gross profit		40000
Less: Administration expenses	15000	
Selling expenses	5000	
Financial expenses	5000	(25000)
Net profit		15000

Recognition of Income and Expenditure Account:

Income – should be recognized / recorded at the time when goods are sold or services are rendered.

Expenses – should be recognized / recorded when benefit relating to that expense has been drawn.

Income Statement and Net Income

Income Statement summarizes operating results of a business by matching revenues with expenses over the same accounting period.

Net income is the increase in owner's equity resulting from profitable operations of a business. This is accompanied by increase in total assets, (but not necessarily cash) or decrease in total liabilities. It may happen that a profitable business may also run short of cash, because the profit that it earns is tied up in other assets i.e. Accounts Receivables, fixed assets etc or else, it was used in paying out its obligations like Accounts Payable etc. Net loss is the corresponding decrease in owner's equity.

Elements of Income Statement

Revenues: This is defined as sale price of goods sold and services rendered during an accounting period.

Expenses: These constitute Cost to the business of the goods and services used in business operations during the same accounting period. In other words, these are “**cost of doing business**”. Just as in Balance Sheet we have sub-elements or sub-Accounts, in Income Statement also there are sub-elements/sub-Accounts i.e. difference sources of Revenues, different expenses like cost of good sold, depreciation expenses, interest expense etc.

Accrual Basis of Revenue & Expense Accounting

Revenue Recording is done on Realization Principle. In this case, the date of rendering services or date of delivery of good sold is considered as the date of earning revenue. For example, if services are rendered in January and actual receipt of revenue/fee takes place in February i.e. after one month as per agreement, still the revenue would be recorded in the month of January since it was “earned” in January.

Expense Recording is done on matching principle. This means that revenues are offset by all expenses incurred in producing those revenues, pertaining to a particular accounting period. It would thus be seen that there is cause-and-effect relationship between revenues and expenses. For example, June salaries are paid in July but these have to be recorded as salaries expense for June. It must also be noted that Revenue & cash Receipts and Expense & cash payments are different. The two can happen before, after or during the accounting period.

Dr. & Cr. Rules for Recording Revenues and Expenses are the same as those for Owner's equity or Capital Account.

Expenses are the costs of the goods and services used up in the process of earning revenue. Examples include the cost of employee's salaries, advertising, rent, utilities, and the gradual wearing-out (depreciation) of such assets as buildings, automobiles, and office equipment. All these costs are necessary to attract and serve customers and here by earn revenue. **Expenses** are often called the “costs of doing business” that is, the cost of the various activities necessary to carry on a business.

An **expense** always causes a *decrease in owner's equity*. The related changes in the accounting equation can be either (1) a decrease in assets, or (2) an increase in liabilities. An **expense** reduces assets if

payment occurs at the time that the **expense** is incurred. If the **expense** will not be paid until later, as for example, the purchase of advertising services on account, the recording of the expense will be accompanied by an increase in liabilities.

Lesson-6

PREPARING FINANCIAL STATEMENTS AND NOTES (Continued)

Business transactions during August, 2006

Now let us suppose that during the month of August, actual business operations commenced and Khizr provided services to clients at the agreed commission/fee rate of 2% of rental value of property. Suppose rental value of property during August was Rs.532, 000. Commission/fee earned at the rate of 2% comes to Rs.10, 640. Commission actually received (in cash) during August was Rs.5, 000, the rest was to be paid later.

- Provided services to clients at the agreed commission/fee rate of 2% of rental value of property.

Rental value of property during Aug: Rs.532, 000

Rental Value	= Rs.532, 000
Commission (532,000 x 2%)	= Rs. 10,640
Actual Cash Received	= Rs. 5,000

Date	Description	L/F	Dr.	Cr.
Aug	Cash Account		5,000	
	Accounts Receivable		5,640	
	Commission Received			10,640
	Commission Income Received			

- Advertising expenses (paid in advance) Rs.645.

Date	Description	L/F	Dr.	Cr.
	Cash Account			645
	Advertising expense paid		645	

- Salaries for Aug (to be paid in September) Rs.7, 400.

Date	Description	L/F	Dr.	Cr.
	Salaries Expense		7,400	
	Salaries Payables			7,400
	Accrued salaries for the month of August			

- Telephone bill for Aug (to be paid in September) Rs.400.

Date	Description	L/F	Dr.	Cr.
	Utilities Expense		400	
	Utilities bill Payables			400
	Accrued telephone bill			

Expenses were:-

Advertising expenses (paid in advance)	Rs. 645
Salaries for Aug (to be paid in September)	Rs. 7, 400
Telephone bill for Aug (to be paid in September)	Rs. 400

The above is incomplete list of Expenses. There are certain invisible expenses amounting to Rs.195 (in which no cash is involved), which are recorded at the end of accounting period. Before we take these up, let us distinguish between Expenditure and Expenses.

Expenditure Vs Expenses

Expenditure: It is the cost benefiting or spreading over two or more accounting periods. **Expense** is the portion of Expenditure for one accounting period only.

Examples: Expenditure on fixed assets is incurred in lump sum. Then there are pre-paid costs e.g. insurance, pre-paid rent, for more than one year/accounting period. It may be noted that expenditure on advertisements, employees training, are directly charged to expenses because in these cases, the number of accounting periods over which revenue is likely to be produced (or increased) because of these, are not readily estimable.

- Incomplete list of Expenses: Invisible expenses (non cash involved), recorded at the end of accounting period.

Date	Description	L/F	Dr.	Cr.
	Depreciation Expense-Building		150	
	Depreciation Expense-Equipment		45	
	Accumulated Depreciation			195
	Depreciation Expenses			

Invisible Expenses

Cost value of Building	= Rs. 36,000
Estimated useful life	= 20 years
Expense for one month will be calculated as follows:	
	= $36,000 \times 1/240$
	= Rs. 150 per month

This **Rs. 150** is the portion of expenditure of **Rs.36, 000**. This expense is technically called Depreciation

Note: Land is not depreciated

Value of Office Equipment = 5,400
 Estimated useful life = 10 years
 The calculation of expense on equipment will be
 Calculated as follows: = 5,400 X 1/120
 = Rs. 45

This Rs. 45 is technically called **depreciation** on Office Equipment.

Pre-paid costs e.g. Insurance, Pre-paid rent, will be recorded as follows:

Date	Description	L/F	Dr.	Cr.
	Prepaid Rent		12,000	
	Cash Account			12,000
	Rent paid in advance			
	Rent Expense		1,000	
	Prepaid Rent			1,000
	Recording rent expense			

Income Statement
For the period ending August 31, 2006

Revenues

Rs.
10,640

Sales Commission earned.

Expenses

Advertising expenses. 645
 Salaries expenses. 7,400
 Telephone expenses. 400
 Depreciation expense: building 150
 Depreciation expense: office equipment 45

Total Expense 8,640
 Net Income 2000

With this background, let us now move on to the fifth step in the Accounting Cycle.

e) Making adjusting entries: These are the Entries required for those transactions which affect revenues or expenses of more than one accounting period.

Immediate recording of every event in some cases is not practical e.g. raw material, office supplies, depreciation. Journal entries of such expenses are recorded at the end of accounting period and are called adjusting entries. Regular journal entries (chronological) are recorded in blue and adjusting entries are recorded in red.

Lesson-7

PREPARING FINANCIAL STATEMENTS AND NOTES (Continued)

Adjusting Entry to record Expenses on Fixed Assets

- The expenditure use to acquire Fixed Assets is spread over a number of Accounting periods.
- The spreading of that expenditure over a number of Accounting periods is called Expense for that period.
- Adjusting entry is also required to record Prepaid Costs.
- Expenses are the expired portion of Assets.

- Office supplies and Raw material are treated at the end of Accounting period.
- The balance of Office supplies & Raw materials is calculated as follows:
-

Opening balance

Add: Purchases

Less: Closing balance

- Prepaid Costs are initially taken as Asset.
Pre paid costs, if consumed entirely during Accounting period are charged directly to expense

Types of Adjusting Entries

- i) Entries to distribute expenditure benefiting more than one accounting period e.g. fixed assets, pre-paid costs (if for more than one year). Pre-paid costs are initially taken as Asset and corresponding portion for an accounting period is reduced there from. In the case of office supplies, raw materials, the formula is: - opening balance + purchases - closing balance. This would give the amount/extent of office supplies, raw materials consumed during the accounting period. It must also be noted that pre paid costs, if consumed entirely during accounting period, are charged directly to expense.

Fixed assets are those which are used for more than one Accounting period.

- ii) Entries to distribute un-earned revenue i.e. revenue collected in advance (deferred revenue). It is first recorded as liability, and is gradually reduced in the subsequent accounting period.
- iii) Entries to record accrued expenses e.g. unpaid salaries, interest payable, to be paid in the subsequent accounting period.
- iv) Entries to record accrued revenues. These are first recorded as Assets i.e. Revenue Receivable. For example if rendering of services/delivery of goods is spread over a number of accounting periods, and billing is to be done at the completion of rendering services or delivering goods, then corresponding adjusting entry for each accounting period is made for Revenue Receivable, but not yet earned.

Khizr Property dealer
Trial Balance
For the month of July 2006

Particulars	Rs.	Rs.
Cash	22,500	
Accounts Receivable	9,500	
Land	130,000	
Building	36,000	
Office Equipment	5,400	
Accounts Payable		23,400
Khizr, Capital (owner's equity)		180,000
Total	203,400	203,400

Adjusted entries are all related to accrual accounting, as would be seen from the very description of each adjusting entry given above.

f) Preparing adjusted trial balance:

This is the sixth step in Accounting Cycle. In this, we take into account the adjusting entries made earlier in step 5 (e).

Adjusting entries are journalized and posted, i.e. recorded in journal and posted in ledger. Accumulated depreciation would double after second month, in the example of adjusted trial balance given above. In the above example, estimated life of building is taken as 20 years and that of office equipment as 10 years, which makes the monthly figure of the use of these assets as Rs.150 and Rs.45 respectively. Other transactions during August 2006 changed balances of cash, A/Cs Receivable, A/Cs payable. Reverting to the earlier reference about invisible expenses of Rs.195, in the Income Statement, these were depreciation expenses of building amounting to Rs.150 and depreciation expenses of office equipment amounting to Rs.45.

The **adjusting entries** which are recorded in Journal at the end of Accounting period are adjusted in, **Adjusted Trial Balance**.

Khizr Property Dealer
Adjusted Trial Balance
August 31,2006

Particulars	Dr.	Cr.
Cash.	16,105	
Accounts Receivable.	18,504	
Land.	130,000	
Building.	36,000	
Accumulated depreciation: building.		150
Office equipment.	5,400	

Accumulated Dep: office equipment.		45
Accounts Payable.		23,814
Owner's equity.		180,000
Sales commission earned.		10,640
Advertising expenses.	645	
Salaries expenses.	7,400	
Telephone expenses.	400	
Depreciation expenses: building.	150	
Depreciation expenses: office equipment.	45	
	214,649	214,649

The above is adjusted trial balance as on August 31, 2006.

Lesson-8

PREPARING FINANCIAL STATEMENTS AND NOTES
(Continued)

Pre-paid costs e.g. Pre-paid rent, will be recorded as follows:

Date	Description	L/F	Dr.	Cr.
	Prepaid Rent		12,000	
	Cash Account			12,000
	Rent paid in advance			

Pre-paid costs e.g. Pre-paid rent, will be recorded as follows:

Date	Description	L/F	Dr.	Cr.
	Rent Expense		1,000	
	Prepaid Rent			1,000
	Recording rent expense			

Pre-paid costs e.g. Pre-paid Insurance will be recorded as follows:

Date	Description	L/F	Dr.	Cr.
	Prepaid Insurance		12,000	
	Cash Account			12,000
	Insurance paid in advance			

Pre-paid costs e.g. Pre-paid Insurance will be recorded as follows:

Date	Description	L/F	Dr.	Cr.
	Insurance Expense		1,000	
	Prepaid Insurance			1,000
	Recording Insurance expense			

g) Preparing Financial Statements

Now we come to the all-important step of preparing Financial Statements from Accounting Records. Income Statement is prepared from Adjusted Trial Balance, first. Then Statement of Owner's equity between Income Statement and Balance Sheet is prepared. For this, Net profit/loss in Income Statement is added to/ subtracted from owner's equity in "Owner's equity Statement", and the total/net is then transferred to Balance Sheet. After the preparation of Balance Sheet, the fourth Financial Statement i.e. Cash flow Statement is prepared separately.

As a practical illustration, let us prepare these Financial Statements.

Income Statement**Income Statement****For the period ending August 31, 2006**

Particulars	Rs.	Rs.
Revenues		
Sales Commission earned.		10,640
Expenses		
Advertising expenses.	645	
Salaries expenses.	7,400	
Telephone expenses.	400	
Depreciation expense: building	150	
Depreciation expense: office equipment	45	
		8,640
Net Income.		2,000

The revenue and expenses shown in the income statement are taken directly from the company's adjusted trial balance. Our measurement of net income is not absolutely accurate or precise, because of the *assumptions and estimates* in the accounting process. An income statement has certain limitations. Remember that the amount shown for depreciation expense or based on *estimates* of the useful lives of the company's building and office equipment. Also the income statement includes only those events that have been *evidence by business transactions*. Alternative titles for the income statement include *earnings statement*, *statement of operations*, and *profit and loss statement*. However, *income statement* is by far the most popular term for this important financial statement. In summary, we can say that an income statement is used to summaries the *operating results* of business by matching the revenue earned during a given time period with the expenses incurred in obtaining that revenue.

Note: This is case of service business, and sole proprietorship. In the case of Merchandise & Manufacturing business:

Net Income=Sales–Cost of Goods sold–Other expenses.

ii) Owner's equity Statement

Owner's equity which was Rs.180, 000 on July 31, 2006 increases by Rs.2000 due to profitable operations during the month of August, 2006. Net income is transferred to owner's equity statement, which is further transferred to Balance Sheet. Correspondingly, there would be either increase in Assets (Left) side of the Accounting Equation (or Balance Sheet), or decrease in Liabilities (Right) side, to maintain balance.

Statement of Owner's equity summarizes increase/decrease in owner's equity during accounting period. It is increased due to profit and additional investment by the owner. It is decreased due to loss and withdrawal/drawing by the owner.

Statement of Owner's equity for the month of August, 2006

Particulars	Rs.
Khizr, capital July 31, 2006	180,000
Add: Net income for August, 2006	2,000
Additional investment by owner	4,000
Sub total	186,000
Less withdrawal/drawing by owner	3,000
Owner's equity August 31, 2006	183,000

III. Balance Sheet

The balance sheet lists the amounts of the company's assets, liabilities, and owner's equity at the end of accounting period. The balances of the assets and liability accounts are taken directly from the adjusted trial balance. Cash is listed first among the assets. It is often followed by such asset as marketable securities, short-term notes receivable, accounts receivable, inventories, and supplies. These are the most common examples of current assets. The term "current assets" includes cash and those assets that will be quickly converted to cash or used up in operations

Khizr Property Dealer**Balance Sheet****As on August 31,2006**

Assets	Rs.	Rs.	Liabilities & Equity	Rs.
Cash		16,105	Accounts Payable	23,814
Accounts Receivables		19,504	Owner's equity	183,000
Land		130,000		
Building	36,000			
Less Accumulated Dep:	150	35,850		
Office Equipment	5,400			
Less Accumulated Dep:	45	5,355		
TOTAL		206,814	TOTAL	206,814

- Owner's equity obtained from Owner's equity statement

Lesson-9

**PREPARATION OF FINANCIAL STATEMENTS
(Continued)**

Other steps in the Accounting Cycle after the preparation of Financial Statements are:-

h) Closing entries in Accounting Cycle.

As previously stated, revenues increase owner's equity, and expenses and withdrawals by the owner decrease owner's equity. If the only financial statement that we needed was a balance sheet, these changes in owner's equity could be recorded directly in the owner's capital account. However, owners, managers, investors, and others need to know amount of specific revenues and expenses, and the amount of net income earned in the period. Therefore we maintain separate ledger account to measure each type of revenue and expense, and other owner's drawings.

The revenue, expense, and drawing accounts are called temporary accounts, are nominal accounts, because they accumulate the transactions of only one accounting period. At the end of this accounting period the changes in owner's equity accumulated in these temporary accounts are transferred into the owner's capital account. This process serves two purposes. First it updates the balance of the owner's capital account for changes in owner's equity account for changes in owner's equity occurring during the accounting period. Second, it returns the balances of the temporary accounts to zero, so that they are ready for measuring the revenue, expenses, and drawings of the next accounting period.

The owner's capital account and other balance sheets are called permanent or real accounts, because their balances continue to exist beyond the current accounting period. The process of transferring the balances of the temporary account into the owner's capital account is called closing the accounts. The journal entries made for the purpose of closing the temporary accounts are called **closing entries**.

Revenue and expense accounts are closed at the end of each accounting period by transferring their balances to a summary account called income summary. When the credit balance of the revenue accounts and the debit balances of expense accounts have been transferred into one summary account, the balance of this income summary will be the net income or net loss for the period. If the revenue (credit balances) exceeds the expenses (debit balances), the income summary account will have a credit balance representing net income. Conversely, if expenses exceed revenue, the Income Summary will have a debit balance representing net loss. This is consistent with the rule that increases in owner's equity are recorded by credits and decreases are recorded by debits.

Closing Entries for Revenue Accounts

Revenue accounts have credit balances. Therefore, closing a revenue account means transferring its credit balance to the Income Summary account. This transfer is accomplished by a journal entry debiting the revenue account an amount equal to its credit balance, with an offsetting credit to the Income Summary account. The debit portion of this closing entry returns the balance of the revenue account to zero; the credit portion transfers the former balance of the revenue account into the Income Summary account.

Closing Entries for Expense Accounts

Expense accounts have debit balances. Closing an expense account means transferring its debit balance to the Income Summary account. The journal entry to close an expense account, therefore, consists of a

credit to the expense account in an amount equal to its debit balance, with an offsetting debit to the Income Summary account.

Closing the Income Summary Account

Due to increase in net income owner's equity increases. The credit balance of Income Summary account is, therefore transferred to the owner's equity account. Conversely if the expenses of a business are larger than its revenue, the Income Summary account will have a debit balance, representing a net loss for the accounting period. In this case, the closing of the Income Summary account requires a debit to the owner's capital account and an offsetting credit to the Income Summary account. The owner's equity will, of course, be reduced by the amount of the loss debited to the capital account.

Note that the Income Summary account is used only at the end of the period when the accounts are being closed. The Income Summary account has no entries and no balance except during the process of closing the accounts at the end of accounting period.

Closing the Owner's Drawing Account

Withdrawals of cash or other assets by the owner are not considered an expense of the business and, therefore, are not a factor in determining the net income for the period. Since drawings by the owner do not constitute an expense, the owner's drawing account is closed not into the Income Summary account but directly to the owner's capital account.

Revenue, Expense and Drawing (by owner) change owner's equity. These are temporary capital accounts. To make these Accounts ready for recording events of next accounting periods, we take the following steps:-

- Close (transfer) Revenue Accounts to Income Summary Account.
- Close (transfer) Expense Accounts to Income Summary Account.
- Close (transfer) Income Summary Account to Owner's Equity Account or Capital Account.
- Close Drawing Account directly to Capital Account.

Debit and credit entries of course are involved in journal and ledger.

- i) Prepare after-closing trial balance. In many cases, another trial balance is prepared after closing entries have been recorded in journal and posted in ledger.

Summary

Steps in Accounting Cycle:

The accounting procedures in the accounting cycle may be summarized as follows

1. Journalize Transactions
2. Post to Ledger Accounts
3. Prepare A Trial Balance
4. End of Period Adjustments
5. Prepare an Adjusted Trial Balance
6. Prepare Financial statements
7. Journalize and Post Closing Entries
8. Prepare an After Closing Trial Balance

Lesson-10

PREPARATION OF FINANCIAL STATEMENTS**Income Statement**

A typical and Standard Income Statement and Balance Sheet of a manufacturing concern would be as follows:-

INCOME STATEMENT/PROFIT & LOSS ACCOUNT
MOOSA & CO. LTD
FOR/DURING THE PERIOD 2005-06

		Rs. in
Net Sales *		100
Cost of Goods Sold *		
Raw material	30	
Salaries & wages (direct Labour)	10	
Stores & spares	5	
Utilities	5	
Depreciation	5	
Others	5	
Total		60
Gross Profit (loss)	40	

* Net Sales = Gross Sales – Sales returns – Sales allowances/discounts.

* Cost of Goods sold = Cost of production of goods actually sold; also called “cost of sales”: largest expense item.

Operating expenses	
Selling & admin	5
Advertising	5
Depreciation & others	5
Total	15
Operating Profit (EBIT)	25

EBIT: Earning before Interest and Taxes.

Other expenses *	
Financial charges i.e. interest	5
Loss on sale of assets	1
Purchase of goodwill	1
Total	7
Profit before tax (EBT)	18

Provision for tax	5	
Profit after tax		13
Other income *		
Investment gains	7	
Net Profit		20
		===== (bottom line)
Dividend paid		5
Retained earnings		15
(Added in shareholder's equity and carried forward to Balance Sheet)		

* Other expenses: also called non-operating expenses.

* Other income: Dividend revenue, Interest revenue, Gain on Assets Sales etc.

The above is called Multiple – Step Income Statement.

Special items: These are one-time items that will not recur in the future, and are disclosed separately on Income Statement. Examples are: discontinued operations (firm selling a major portion of its business), extra ordinary transactions (unusual in nature), and cumulative effect of changes in accounting methods of Inventory and Depreciation.

Illustration # 1

The following Trial Balance has been extracted from the books of ABC Company. on 30-06-2002. From this, prepare an Income Statement and Balance Sheet for the year ended 30-06-2002.

Particulars	Dr.	Cr.
Sales		200,000
Purchases	180,000	
purchase return		2,500
Office salaries	3,500	
Furniture & Fixture	16,000	
Office Equipment	11,000	
Rent	5,000	
Accounts Payable(creditors)		28,000
Sales Salaries	3,000	
Freight & custom duty on purchases	6000	
Repair of office equipment	2,000	
Accounts Receivable(debtors)	52,000	
Freight on sales	1,000	
Capital		41,500
Cash in hand	37,000	
Loan from bank(for three years)		50,000
Bank charges	500	
Interest on loan	5,000	
Grand Total	322,000	322,000

Solution

C Company.			
Profit & Loss Account for the year ended June 30, 2002.			
	Rs.		Rs.
Purchases	180,000	Sales	200,000
Freight, custom duty on purchases	6,000	Purchase return	2,500
Gross Profit	16,500		
	202,500		202,500
Salaries	3,500	Gross Profit	16,500
Rent	5,000		
Repair of office equipment	2,000		
Sales salaries	3,000		
Freight on sales	1,000		
Interest on loan	5,000		
Bank charges	500		
		Net loss	3,500
Total	20,000		20,000

ILLUSTRATION #2

Following trial balance has been extracted from the books of Hassan Manufacturing Concern on June 30, 2002.

Hassan Manufacturing Concern		
Trial balance		
As on June 30, 2002		
Particulars	Amount Dr. (Rs.)	Amount Cr. (Rs.)
Raw Material stock Jul. 01, 2001	35,500	
Work in process Jul. 01, 2001	42,000	
Finished goods stock Jul. 01, 2001	85,000	
Raw material purchased	250,000	
Wages	180,000	
Freight inward	12,000	
Plant and machinery	400,000	
Office equipment	45,000	
Vehicles	200,000	
Acc. depreciation Plant		195,200
Acc. depreciation Office equipment		12,195
Acc. depreciation Vehicles		97,600
Factory overheads	125,000	
Electricity	80,000	
Salaries	140,000	
Salesman commission	120,000	
Rent	200,000	
Insurance	150,000	

General Expense	60,000	
Bank Charges	8,500	
Discounts Allowed	20,000	
Carriage outward	35,000	
Sales		1,500,000
Trade Debtors	250,000	
Trade Creditors		220,000
Bank	165,000	
Cash	110,000	
Drawings	175,000	
Capital July 01, 2001		863,005
Total	2,888,000	2,888,000

Notes:

- Stock on June 30, 2002.
 - Raw Material 42,000
 - Work in Process 56,500
 - Finished Goods 60,000
- 50% of electricity, insurance and salaries are charged to factory and balance to office.
- Depreciation to be charged on Plant & Machinery at 20%, Office Equipment at 10% and Vehicles at 20% on WDV.
- Write off bad debts Rs. 30,000.
- All the wages are direct.

Required:

You are required to prepare profit and loss account for the year and balance sheet as on June 30, 2002.

SOLUTION**Profit & Loss Account**

Hassan Manufacturer Concern		
Profit and Loss Account		
For the Year Ending June 30, 2002		
Particulars	Note	Amount Rs.
Sales		1,500,000
Less: Cost of Goods Sold	1	796,960
Gross Profit		703,040
Less: Administrative Expenses	2	518,761
Less: Selling Expenses	3	155,000
Operating Profit		29,279
Less: Bank Charges		8,500
Net Profit Before Tax		20,779

NOTES TO THE ACCOUNTS**Note # 1 Cost of Goods Sold**

Stock of Raw Material Jul 01, 2001		35,500
Add. Purchases		250,000
Add. Freight Inward		12,000
		297,500
Less: Closing Stock of Raw Material		(42,000)
Raw Material Consumed		255,500
Direct labour		180,000
Factory Overheads		
Factory Overheads	125,000	
Electricity (50% of 80,000)	40,000	
Salaries (50% of 140,000)	70,000	
Insurance (50% of 150,000)	75,000	
Plant Depreciation (Note 5)	40,960	
		350,960
Total Factory Cost		786,460
Add: Work in Process Jul 01, 2001		42,000
Less: Work in Process Jun 30, 2002		(56,500)
Cost of Goods Manufactured		771,960
Add: Finished Goods Stock Jul 01, 2001		85,000
Less: Finished Goods Stock Jun 30, 2002		(60,000)
Cost of Goods Sold		796,960

Note # 2 Administrative Expenses

Salaries (50% of 140,000)	70,000
General Expenses	60,000
Rent	200,000
Insurance (50% of 150,000)	75,000
Discount Allowed	20,000
Bad Debts	30,000
Office Electricity (50% of 80,000)	40,000
Depreciation Vehicles (Note 5)	20,480
Depreciation Office Equip. (Note5)	3,281
Administrative Expenses	518,761

Note # 3 Selling Expenses

Salesman Commission	120,000
Carriage Outward	35,000
Selling Expenses	155,000

Balance Sheet

The balance sheet lists the amounts of the company's assets, liabilities, and owner's equity at the end of accounting period. The balances of the assets and liability accounts are taken directly from the adjusted trial balance. Cash is listed first among the assets. It is often followed by such asset as marketable securities, short-term notes receivable, accounts receivable, inventories, and supplies. These are the most common examples of current assets. The term "current assets" includes cash and those assets that will be quickly converted to cash or used up in operations

BALANCE SHEET
MOOSA & CO LTD.,
AS ON JUNE 30, 2006

I) Account form

		Rs. in _____	
ASSETS		LIABILITIES+SHARE	HOLDERS'
FUNDS/OWNERS' EQUITY			
Current Assets		Current liabilities	
- cash & cash equivalents	15		
- Marketable securities	3		
- pre-paid expense	2	- Bank borrowings	15
- Accounts Receivables	10	- Accounts payable	5
(trade debtors/customers)		(trade creditors)	
- Inventory	20	-Provision for tax	5
		Total current liabilities	25
		Long-term interest bearing loan	
Total current Assets	50	(fixed liabilities)	50
Fixed Assets	150	Owner's equity/shareholders' funds	125
Total Assets	200	Total Liabilities and owners' equity	200
	=====		=====

Note: The above list is not exhaustive. It may include many other items. Cash equivalent are cash substitutes not immediately required i.e. short-term high liquid investment, usually for three months. Examples are Treasury bills, certificates, prize bonds etc. Marketable securities are investments in govt. bonds and stocks and bonds of other companies. Fixed Assets are acquired for long-term use e.g. Land, Building, Plant & Machinery, Vehicles, Furniture's & Fixtures etc. Long-term loans are usually secured against inventory and fixed assets. Tax is shown both on Balance Sheet as current liability i.e. tax payable and on Income Statement, as Interest expense for the accounting period.

Lesson-11

PREPARATION OF FINANCIAL STATEMENTS**ii) Report form**

Balance sheet (As on end of accounting period)

Rs. in _____

	Assets	
i)	Current Assets	50
	↓ ↑	
ii)	Fixed Assets	150
	Total:	200

LIABILITIES & OWNERS' EQUITY/SHARE HOLDERS' FUNDS.**STOCK**

↑↓	Current liabilities	25
	Fixed/long term liabilities	50
	Owners' equity/shareholders funds.	125
	Total:	<u>200</u>

Recording in Balance Sheet: The guiding rule for an accountant is to be conservative and choose lower values. For example marketable securities are recorded at cost, but current market rate is also mentioned. Inventory is recorded at cost or market value, whichever is lower. Land is recorded at historical cost. Other fixed assets (i.e. Building, Plant & Machinery, etc) are recorded at original cost less accumulated depreciation called "Book value. The accountant must also make provisions for doubtful debts and inventory losses.

Current Assets: These are assets capable of being converted into cash within one year or operating cycle, whichever is longer. Operating cycle is the time required to purchase or manufacture inventory, sell the product and collect cash i.e.

Cash/assets -----> Inventory----->Receivables -----> cash
 Processing sales collection

Length of operating cycle = inventory sale days + Receivable Collection days. Current assets are recorded in order of liquidity i.e. ease of conversion into cash. Within current Assets, some assets are more liquid than others. These are Quick Assets= Total current Assets – Inventory – Pre paid expenses. The accountant must make allowances for "doubtful accounts" i.e. "unrealizable". It may also be noted that proportion of current and fixed assets to total assets is determined by the nature of business.

Some additional items on Balance Sheet: Other Assets: These are Incorporation cost i.e. start-up costs in connection with setting up new business, property held for sale etc. Other additional items may be, Intangible Assets like Goodwill, patents, trademarks etc. Goodwill arises when one business acquires another for a price in excess of its fair market value. This is shown on "fixed Assets side of B/Sheet. It has no physical substance or existence as such. Common meaning of "Good Will" in non-accounting terms is the benefits derived from a favorable reputation of the business.

ILLUSTRATION #2

Following trial balance has been extracted from the books of Hassan Manufacturing Concern on June 30, 2002.

Hassan Manufacturing Concern		
Trial balance		
As on June 30, 2002		
Particulars	Amount Dr. (Rs.)	Amount Cr. (Rs.)
Raw Material stock Jul. 01, 2001	35,500	
Work in process Jul. 01, 2001	42,000	
Finished goods stock Jul. 01, 2001	85,000	
Raw material purchased	250,000	
Wages	180,000	
Freight inward	12,000	
Plant and machinery	400,000	
Office equipment	45,000	
Vehicles	200,000	
Acc. depreciation Plant		195,200
Acc. depreciation Office equipment		12,195
Acc. depreciation Vehicles		97,600
Factory overheads	125,000	
Electricity	80,000	
Salaries	140,000	
Salesman commission	120,000	
Rent	200,000	
Insurance	150,000	
General Expense	60,000	
Bank Charges	8,500	
Discounts Allowed	20,000	
Carriage outward	35,000	
Sales		1,500,000
Trade Debtors	250,000	
Trade Creditors		220,000
Bank	165,000	
Cash	110,000	
Drawings	175,000	
Capital July 01, 2001		863,005
Total	2,888,000	2,888,000

Notes:

- Stock on June 30, 2002.
 - Raw Material 42,000
 - Work in Process 56,500
 - Finished Goods 60,000
- 50% of electricity, insurance and salaries are charged to factory and balance to office.

- Depreciation to be charged on Plant & Machinery at 20%, Office Equipment at 10% and Vehicles at 20% on WDV.
- Write off bad debts Rs. 30,000.

All the wages are direct

Balance Sheet

Hassan Manufacturer Concern		
Profit and Loss Account		
For the Year Ending June 30, 2002		
Particulars	Note	Amount Rs.
Fixed Assets at WDV	4	275,284
Current Assets	5	653,500
Current Liabilities	6	(220,000)
Working Capital		433,500
Total Assets Employed		708,784
Financed by:		
Capital		863,005
Add: Profit for the year		20,779
Less: Drawings		(175,000)
Total Liabilities		708,784

Note # 4 Fixed Assets at WDV

	Cost	Rate	Acc. Depreciation			WDV
			Opening	For the year	closing	
Plant & Mach.	400,000	20%	195,200	40,960	236,160	163,840
Vehicles	200,000	20%	97,600	20,480	118,080	81,920
Office Equip.	45,000	10%	12,195	3,281	15,476	29,524
			64,721			275,284

Note # 5 Current Assets

Stock		
Raw Material	42,000	
Work in Process	56,500	
Finished Goods	60,000	158,500
Debtors		250,000
Less: Bad Debts		(30,000)
Bank		165,000
Cash		110,000
Current Assets		653,500

Note # 6 Current Liabilities

Trade Creditors	220,000
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Lesson-12

**PREPARATION OF FINANCIAL STATEMENTS
(Continued)****Cash Flow Statement**

Cash flow statement shows, how cash was generated and how it was used during the period. These days, it is required by law to include this statement in financial statements, especially in case of financial statements of limited companies.

Need For Cash Flow Statement

For any business, it is important to ensure that:

- Sufficient profits are made to compensate owners for the investment made, efforts put in and the risk taken for the business,
- Sufficient funds are available to meet the obligations of the business as and when required.

The information as to profitability is provided by the Profit and Loss Account. The information as to availability of funds or financial health is provided by the balance sheet. But the balance sheet is prepared on a specific date and can provide information of financial position as on that date only. Cash flow, on the other hand provides more detailed information about the movement of funds during the period. With the help of cash flow, we can determine the amount of cash generated from different sources and the areas on which it is utilized.

Difference between Profitability and Liquidity**Liquidity**

It is the ability of a business to pay its debts in time. By having good liquidity, we mean that a business has sufficient liquid funds (cash and cash equivalents) so that it can repay liabilities.

Cash

Cash includes cash in hand and demand deposits.

Cash Equivalents

Cash equivalents are those short term investments that can be converted into a known amount of cash at any time. Usually, investments up to three months maturity are included in cash equivalents.

People generally mix up profitability with liquidity. One might think that if a business has earned, say, One Million Rupees of profit than it should have approximately the same amount of cash in it.

But mostly this is not the case. Consider the following example:

- A person starts a small business with Rs. 10,000.
- He purchases goods worth Rs. 20,000. Rs. 10,000 is paid in cash and remaining is payable at the end of the month.
- The same day, all the goods are sold on credit of two months for Rs. 30,000.
- Now if we draw a profit and loss account at the end of the month, the business has earned a profit of Rs. 10,000, considering no expenses.

- But at the same time, it is time to pay to the Creditors, whereas payment from debtor is not due yet.
- This means that although the business earned a profit of Rs. 10,000 but it has no cash to pay to its creditors.
- This simple example helps us to understand that liquidity is different from profitability
- But it is as important as profitability.

Components of Cash Flow Statement

Cash flow statement is divided into three components

- Cash Flow from Operating Activities
- Cash Flow from Investing Activities
- Cash Flow from Financing Activities

Cash Flow from Operating Activities

Cash flow from operating activities is generally derived from the principal revenue producing activities of the business.

Cash Flow from Operating Activities is the indicator of success or failure of a business's operations. If the cash flow from operations is continuously negative, this means that the business revenue is not enough to recover the costs that are incurred to earn it. Therefore, in the long run Cash flow from operations must be positive.

Examples of cash flows from operating activities are:

- Cash receipt from sale of goods and rendering of services.
- Cash receipts from fees, commission and other revenues.
- Cash payments to suppliers for goods and services.
- Cash payments to and on behalf of the employees.
- Cash payments or refunds of income taxes.

EXAMPLE

Net Profit before Tax	16,514
Add: Adjustment for Non-Cash Items	
Depreciation for the Year	5,500
Provision for Doubtful Debts	810
Exchange Gain / Loss	-
Gain / Loss on Disposal of Assets	-
Return on Investments	4,000
Mark-up on Loans	3,500
Operating Profit Before Working Capital Changes	30,324
Working Capital Changes	
Add: Decrease in Current Assets	40,000
Less: Increase in Current Assets	(50,000)
Add: Increase in Current Liabilities	-
Less: Decrease in Current Liabilities	-
Cash Generated From Operations	20,324
Less: Markup paid on loans	(3,000)

Less: Taxes Paid	(5,000)
Net Cash Flow from Operating Activities	12,324

Cash Flow from Investing Activities

Cash flow from investing activities includes cash receipts and payments that arise from Fixed and Long Term assets of the organization.

Cash Flows from Investing Activities shows the investment trend of the business. If it is negative (Outflow) this means that the company is investing in long term assets and is expanding. On the other hand if it is positive (Inflow) over the years, this means that the company is selling its long term investments.

Examples of cash flows from investing activities are:

- Cash payments to acquire property plant and equipment. These also include payments made for self-constructed assets.
- Cash receipts from sale of property plant and equipment.
- Cash payments and receipts from acquisition and disposal of other than long term assets e.g. Shares, debentures, TFC, long term loans given etc.

If assets are held for trading purposes or in normal course of business e.g. car / property dealers and loans given by banks, then cash flow from these are included in Operating Cash Flow.

EXAMPLE

Cash Flow from Investing Activities

Add: Disposal of Fixed Asset and Long Term Investments	100,000
Less: Acquisition of Fixed Assets and Long Term Investments	(80,000)
Add: Dividend Received / Returns on Investment Received	-
Net Cash Flow from Investing Activities	20,000

Cash Flow from Financing Activities

Cash flow from financing activities includes cash receipts and payments that arise from Owners of the business and other long term liabilities of the organization.

Cash Flows from Financing Activities shows the behavior of investors (both equity capital and debt capital). A positive figure (inflow) shows that funds are being invested in the company and vice versa.

Examples of cash flows from financing activities are:

- Cash received from owners i.e. share issue in case of company and capital invested by sole proprietor or partners.
- Cash payments to owners i.e. dividend, drawings etc.
- Cash receipts and payments for other long term loans and borrowings.

EXAMPLE**Cash Flow from Financing Activities**

Add: Shares Issued / Capital Invested	1,000,000
Less: Dividend Paid / Drawings	(400,000)
Add: Increase in Long Term Borrowings	150,000
Net Cash Flow from Financing Activities	750,000

Procedure of Preparing Cash Flow

Cash Flow Statement is prepared as follows:

- We start from the Profit / Loss for the period before taxation.
- Adjustments are made for non-cash items that are included in the profit and loss account such as Depreciation, Provisions and other items that relate to investing and financing activities.
- This gives us Operating Profit before Working Capital Changes.
- Then Working Capital Changes, i.e. increase or decrease in items of current assets and liabilities, are added / subtracted (Cash and Cash Equivalents are not included here)
- This gives the Cash Flow from Operations.
- To this figure, we add / subtract cash flows from investing and financing activities.
- This gives us Net Increase / Decrease in Cash and Cash Equivalents.
- To this figure we add Opening Balance of Cash and Cash Equivalents (that we excluded from current assets)
- This gives us the Closing Balance of Cash and Cash Equivalents.

Increase or Decrease is generally taken as difference in opening and closing balances of accounts reported in balance sheets.

FORM OF CASH FLOW STATEMENT**Name of the Entity****Cash Flow Statement for the Period Ending -----**

Net Profit before Tax	XYZ
Add: Adjustment for Non-Cash Items	
Depreciation for the Year	XYZ
Provision for Doubtful Debts	XYZ
Exchange Gain / Loss	XYZ
Gain / Loss on Disposal of Assets	XYZ
Return on Investments	XYZ
Mark-up on Loans	XYZ
Operating Profit before Working Capital Changes	XYZ
Working Capital Changes	
Add: Decrease in Current Assets	XYZ
Less: Increase in Current Assets	(XYZ)
Add: Increase in Current Liabilities	XYZ
Less: Decrease in Current Liabilities	(XYZ)

Cash Generated From Operations	XYZ
Less: Markup paid on loans	(XYZ)
Less: Taxes Paid	(XYZ)
Net Cash Flow from Operating Activities	XYZ
Cash Flow from Investing Activities	
Add: Disposal of Fixed Asset and Long Term Investments	XYZ
Less: Acquisition of Fixed Assets and Long Term Investments	(XYZ)
Add: Dividend Received / Returns on Investment Received	XYZ
Net Cash Flow from Investing Activities	XYZ
Cash Flow from Financing Activities	
Add: Shares Issued / Capital Invested	XYZ
Less: Dividend Paid / Drawings	(XYZ)
Add: Increase in Long Term Borrowings	XYZ
Net Cash Flow from Financing Activities	XYZ
Net Increase / Decrease in Cash and Cash Equivalents	XYZ
Add: Opening Balance of Cash and Cash Equivalents	XYZ
Closing Balance of Cash and Cash Equivalents	XYZ

IV) Statement of cash flows. This final Financial Statement provides net results of cash inflows (receipts) and cash outflows (payments) during an accounting period. Banks/creditors/investors look for this statement, because it gives them a picture of net cash flow of the business. As already explained, positive net income (profit) does not necessarily mean increase in cash. Therefore such statement must be prepared in order to depict actual cash position. It is clear that a highly profitable business may also go bankrupt. Therefore profitability does not necessarily mean solvency i.e. ability to pay debts and obligations. This fact gives rise to the need for preparing cash flow statement.

Parts of cash flow statement

Cash “flows” through a business during accounting period by Cash & Cash equivalent (T-bills, saving certificates, bonds etc), and through operating activities which include, producing or delivering goods for sale and providing services, and also cash effects of transactions and other events that determine net income.

For example Cash flows/collections from sales and interest and dividends received would be cash Inflows. Similarly, purchase of inventories and payment of operating expenses would constitute cash outflows.

Generating positive cash from operations is the preferred method to finance capital expenditure, debt repayments and dividend payments.

The third method or process by which cash “flows” through a business is the group of its activities called investing activities which include short-term investments, acquiring/disposing of securities, acquiring/disposing of plant assets, and lending money/collecting loan.

The fourth method or process of cash flow is the group of activities called “Financial” activities which include borrowings from creditors/repaying the principal, obtaining resources from owners, and providing owners with return on investment.

The fifth method or process of cash flow in a business is of course the effect of exchange rate fluctuations on cash.

To prepare cash flow statement, look at changes in all of balance sheet accounts from beginning to end of accounting period, and transfer the changes to appropriate area of cash flow statement.

Cash Flow from operating activities.

Inflows in this case are: - cash collections from customers, Interest/dividends collected, and other operating cash receipts e.g. proceeds from litigations.

Outflows would be, cash paid to suppliers & employees, interest & taxes paid and other operating cash payments e.g. payments in litigations.

It should be noted that receipt and payment of interest are classified as operating activities and not investing or financing activities.

Net of the “Inflows” and “Outflows”, gives cash flow from operating activities.

Cash flow from investing activities:

Inflows in this case are proceed from sales of Certificates/ Securities, proceeds from sales of Plant assets, and collection of loans (principal).

Outflows here would be purchase of Certificates/Securities, purchase of plant assets, and loans made to borrowers.

Net of ‘Inflows’ and ‘Outflows’ gives cash flow from investing activities.

Cash flow from financing activities

Here, the ‘Inflows’ are proceeds from borrowings, proceeds from issuing “bonds payable”, and proceeds from issuing capital stock.

Outflows correspondingly are payment to settle debts (principal), and payment of dividends. Net of ‘Inflows’ and ‘Outflows’, gives cash provided by financing activities.

Sum of net cash flows from all the three activities viz Operating, Investing and Financing gives overall cash flow during the accounting period.

Analysis of Cash Flow Statement determines firm’s ability to generate cash from operations, its capacity to meet cash obligations and its future financing needs. It indicates firm’s success in investing activities, and determines the magnitude, fluctuations and causes of the positive or negative operating cash flow.

Lesson-13

STATEMENTS OF CASH FLOWS (Continued)

Preparing Cash Flows

Ledgers are maintained on accrual basis; not on cash basis. Preparing Cash Flow involves converting accrual-based accounts into cash-based. In small business, cash flow statement is prepared directly from special journals for cash receipts and cash payments. For most businesses, such statement is prepared by analyzing Income Statement and balance sheet.

Analyzing Income Statement involves re-arrangement of its items/Accounts in two major groups viz (i) Sales, other income and gains, and (ii) Cost of sales, other expenses and losses. These cover Operating and Investing Activities.

Analyzing balance sheet involves looking at changes in all of balance sheet accounts (except cash) from beginning to end of accounting period, and transferring these changes to appropriate area of cash flow statement.

↑	Asset Account	Dr.	Asset Accounts	↓	Cr
↑	Liabilities Account	Cr	Liability Accounts	↓	Dr
↑	Owner's Equity Account	Cr	Owner's Equity A/C	↓	Dr

The arrow ↑ shows increases, and ↓ shows decreases. It has to be determined whether a certain increase or decrease (which is debited or credited in ledger accounts involves cash inflow or cash outflow. For example decrease in Asset Account other than cash shows either collection of Accounts Receivable or sale of fixed assets, which results in Cash Inflow. Similarly increases in Assets say fixed assets would imply purchase of fixed assets and hence cash outflow.

Practical exercise: Consider the following Income Statement of a business.

MOOSA CORPORATION
INCOME STATEMENT
FOR THE YEAR ENDED JUNE 30, _____

		Rs. _____
Net sales		900,000
Cost of Goods sold		500,000
Gross Profit		400,000
Operating expenses		300,000
(Includes depreciation Rs.40, 000)		
Operating Profit (EBIT)		100,000
Other expenses		
Interest	35,000	
Loss on sale of marketable securities	4,000	39,000
Profit before tax (EBT)		61,000
Income tax expenses		36,000
Profit after tax		25,000

Other Income		
Dividend revenue	3,000	
Interest revenue	6,000	
Gain on sale of plant assets	31,000	40,000
Net Income		<u>65,000</u>

Additional Information (AI) obtained from analysis of changes in the balance sheet accounts during the current year:-

Cash & Cash equivalents at beginning of the year	Rs.40, 000
at end of the year	Rs.75, 000

Other additional information classified into the three categories i.e. Operating, Investing and Financing Activities, was as follows:-

Lesson-14

STATEMENTS CASH FLOWS (Continued)

Additional Information relating to Operating Activities

1. Accounts Receivable increased by Rs.30, 000.
2. Accrued interest i.e. interest receivable decreased by Rs.1, 000 (Dividend revenue recognized on cash basis & interest revenue on accrual basis).
3. Inventory increased by Rs.10, 000 and accounts payable by Rs.15, 000.
4. Short-term prepaid expenses increased by Rs.3, 000.
5. Accrued expenses (payable) decreased by Rs.6, 000.
6. Depreciation for the year Rs.40, 000.
7. Interest payable increased by Rs.7, 000.
8. Income tax payable decreased by Rs.2, 000.

Additional Information relating to Investing Activities

1. Marketable Securities (not qualifying as cash equivalent) show debit entries of Rs.65,000 and credit entries of Rs.44,000.
2. Notes Receivable Account shows Rs.17, 000 debit and Rs.12, 000 credits.
3. Purchase of plant assets for Rs.200,000: Cash Rs.160,000 and long-term Note Payable Rs.40,000
4. Sale of plant assets with book value Rs.44,000

Additional Information relating to Financing Activities

1. Borrowed Rs.45, 000 cash by issuing short-term Notes Payable.
2. Repaid Rs.55, 000 on account of principal on Loans & Notes Payable.
3. Issued bonds payable Rs.100, 000 cash.
4. Issued for cash 1000 shares of Rs.10 par value at Rs.50 per share.
5. Cash dividend paid Rs.40,000

Re-arranging Income Statement in the two categories of Operating and Investing Activities would give the following picture of the Income Statement:

MOOSA CORPORATIAON

Income statement

For the year ended June 30, _____

Sales, other revenue and gains	Rs. _____
Net sales	900,000
Dividend Revenue	3,000
Interest Revenue	6,000
Gain on sales of plant assets	31,000
Total	940,000
Cost of sales, other expenses and losses	
Cost of goods sold	500,000
Operating expenses	300,000

(Includes Dep of Rs. (40, 000))	
Interest expenses	35,000
Income tax expenses	36,000
Loss on sale of marketable securities	4,000
Total	875,000
Net Income	65,000

Lesson-15

FINANCIAL STATEMENTS (Continued)

Cash flow from Operating Activities

Study computation of net sales, cost of goods sold and interest expense etc.

Cash received from customers; Cash received from sales on cash = Net Sales; Cash received from sales on credit/on account = Net sales – increase in Accounts Receivable or Net sales + decrease in Accounts Receivable. Increase/decrease in Accounts Receivable is observed from beginning and ending/closing balances, appearing on Balance Sheet.

(A1 No: 1): Cash received from customers = $900,000 - 30,000 = \text{Rs.} 870,000$

A1 No: 2

Cash dividend received = Dividends Revenue = Rs.3,000: Dividend Revenue is based on cash, so whatever Dividend Revenue is being received, that in cash Inflows.

Cash interest received = Interest Revenue + Decrease in Interest Receivable, or Interest Revenue – Increase in Interest Receivable = $6000 + 1000 = 7000$

Interest & Dividend received = $3,000 + 7,000 = 10,000$

Cash Inflow from operating activities would be: Cash from customers + interest & dividends receivable = $870,000 + 10,000 = \text{Rs.} 880,000$

CASH FLOW STATEMENT CONTD.....

QUESTION # 1

You are given the Balance Sheet of ABC Limited as at June 30, 2001 and June 30, 2002 and its Profit and Loss Account for the year ended June 30 2002.

Required

You are required to prepare Cash Flow Statement for the given period.

ABC Ltd
Balance Sheet As At June 30 2002

	2002 Rs. Rs. '000	2001 Rs. Rs.
‘000		
Building at Cost	181,000	
140,000		
Accumulated Depreciation	36,000	30,000
Written Down Value	145,000	110,000
Plant and Machinery cost	83,000	90,000

Accumulated Depreciation	36,000	35,000
Written Down Value	47,000	55,000
Total Fixed Assets at WDV	192,000	165,000
Long Term Investment	17,000	10,000
Current Assets		
Debtors	30,000	21,000
Stock	25,000	40,000
Short Term Deposits	18,000	15,000
Cash and Bank	30,000	24,000
	103,000	
100,000		
Current Liabilities		
Creditors	15,000	12,000
Proposed Dividend	18,000	16,000
Tax Payable	9,000	8,000
	42,000	36,000
Working Capital	61,000	64,000
Net Assets Employed	270,000	239,000
Financed By		
Share Capital	180,000	160,000
Share Premium Account		17,000
12,000		
General Reserve		23,000
20,000		
Accumulated Profit and Loss	34,000	27,000
Share Holders' Equity	254,000	219,000
Term Finance Certificates	16,000	20,000
Total	270,000	239,000

ABC Ltd**Profit and Loss Account For the Year Ended June 30 2002**

	Rs. '000
Sales	300,000
Cost of Sales	<u>(231,000)</u>
Gross Profit	69,000
Other Income	<u>4,000</u>
	<u>73,000</u>
Less: Administrative Expenses	
Director's Remuneration	4,000
Depreciation on Building	6,000
Loss on Sale of Machinery	2,000
Other Administrative Expenses	<u>12,000</u>
	24,000
Less: Selling Expenses	10,000
Less: Mark up on TFC	<u>2,000</u>
	36,000
Profit for the Year Before Tax	37,000
Provision for tax	9,000
Profit after tax	28,000
Acc. Profit Brought Forward	<u>27,000</u>
	<u>55,000</u>
Appropriation	
Transfer to Reserve	3,000
Proposed Dividend	<u>18,000</u>
	21,000
Accumulated Profit Carried Forward	34,000

Additional Information

1. Other income include dividend on Long Term Investment
2. Cost of goods sold includes depreciation for the year on machinery Rs. 5,000.
3. Accumulated Depreciation on the machine disposed off amounts to Rs. 4,000.

SOLUTION**ABC Ltd****Cash Flow Statement For the Year Ended June 30 2002**

	Note	Rs. '000
Net Profit Before Tax		37,000
Adjustment of Non Cash Items		
Depreciation		11,000
Loss on Sale of Machinery		2,000
Markup on TFC		2,000
		<u>52,000</u>
Less: Other Income		(4,000)
Operating Profit Before Working Capital Changes		<u>48,000</u>
Working Capital Changes		
Reduction in Stock		15,000
Increase in Creditors		3,000
Increase in Debtors		(9,000)
		<u>9,000</u>
Cash Flow from Operations		<u>57,000</u>
Markup on TFC Paid		(2,000)
Tax Paid	1	(8,000)
Net Cash Flow From Operating Activities		<u>47,000</u>
Cash Flow From Investing Activities		
Dividend Received		4,000
Payment to Acquire Investments	2	(7,000)
Purchase of Fixed Assets (Building)	3	(41,000)
Receipt from Sale of Assets	4	1,000
Net Cash Flow From Investing Activities		<u>(43,000)</u>
Cash Flow From Financing Activities		
Issue of Ordinary Shares		20,000
Share Premium Account		5,000
Dividend Paid	5	(16,000)
Repayment of TFC	6	(4,000)
Net Cash Flow From Financing Activities		<u>5,000</u>
Net Increase / (Decrease) in Cash and Cash Equivalents During The Year		<u>9,000</u>
O/B of Cash and Cash Equivalents		<u>39,000</u>
C/B of Cash and Cash Equivalents		<u>48,000</u>

Note # 1**Tax Paid**

Provision for Tax		Account Code -----	
Particulars	Amount Dr. (Rs.)	Particulars	Amount Cr. (Rs.)
Cash	8,000	Bal. B/F	8,000
Balance c/f	9,000	For the year	9,000
Total	17,000	Total	17,000

Note # 2**Payments to Acquire Investments**

Investment		Account Code -----	
Particulars	Amount Dr. (Rs.)	Particulars	Amount Cr. (Rs.)
Bal. B/F	10,000		
Cash	7,000	Bal. C/F	17,000
Total	17,000	Total	17,000

Note # 3**Purchase of Fixed Assets**

Building Cost		Account Code -----	
Particulars	Amount Dr. (Rs.)	Particulars	Amount Cr. (Rs.)
Bal. B/F	140,000		
Cash	41,000	Bal. C/F	181,000
Total	181,000	Total	181,000

Note # 4**Sale Proceed of Machinery**

Machinery at Cost		Account Code -----	
Particulars	Amount Dr. (Rs.)	Particulars	Amount Cr. (Rs.)
Bal. B/F	90,000	Disposal A/c	7,000
		Bal. C/F	83,000
Total	90,000	Total	90,000

Disposal of asset		Account Code -----	
Particulars	Amount Dr. (Rs.)	Particulars	Amount Cr. (Rs.)
Cost	7,000	Accumulated Dep.	4,000
		Loss on Sale	2,000
		Sale Proceed	1,000
Total	7,000	Total	7,000

Note # 5**Dividend Payable**

Dividend Payable		Account Code -----	
Particulars	Amount Dr. (Rs.)	Particulars	Amount Cr. (Rs.)
Cash	16,000	O/B	16,000
		For the Year	18,000
C/B	18,000		
Total	34,000	Total	34,000

Note # 6**Repayment of TFC**

TFC Account		Account Code -----	
Particulars	Amount Dr. (Rs.)	Particulars	Amount Cr. (Rs.)
Cash	4,000	O/B	20,000
C/B	16,000		
Total	20,000	Total	20,000

Lesson-16

FINANCIAL STATEMENTS (Continued)

Cash payment for Merchandise = Cost of Goods Sold + increase in Inventory + Decrease in Accounts Payable, or Cost of Goods sold – Decrease in Inventory – Increase in Accounts Payable.

Keeping in view, A1 No.3; cash payment for merchandise= $500,000 + 10,000 - 15,000 = \text{Rs.}495,000$

A1 No.4, 5 & 6

Pre Paid expenses increased by Rs.3,000, therefore cash payment exceeded the actual expense. Accrued expenses (Payable) decreased by Rs.6000, therefore cash payment exceeded the actual expense (includes employees' expenses). Depreciation of Rs.40,000 requires no cash payment but it does increase total expenses. It is therefore deducted from operating expenses.

Cash payment for operating expenses = expenses + increase in Pre Paid expenses + decrease in Accrued Expenses – Depreciation=

$$300,000 + 3,000 + 6,000 - 40,000 = \text{Rs.}269,000$$

Cash paid for merchandise and operating expenses= $495,000 + 269,000 = \text{Rs.}764,000$

Cash payment for interest: (A17) accrued interest liability (interest payable) increased by Rs.7,000. It means that not all of the interest expense shown in Income Statement was paid in cash. Interest expenses in Income Statement 35,000. From this, reduce the increase in related accrued liability i.e. 7,000. That means interest paid in cash was Rs. 28,000.

Cash payment for Income Tax (A18) Tax liability reduced by Rs.2,000/-. It means that cash payment is greater than expense shown in Income Statement. Tax expenses in Income Statement are Rs.36,000. Add to this the reduction in tax liability, i.e. Rs. 2,000/-. Therefore Income tax paid in cash comes to Rs.38,000/-.

Operating Activities' portion of cash flow statement

	Rs.	
Cash received from customers	870,000	
Interest & dividend received	10,000	
Cash inflow		880,000
Cash paid to suppliers (Merchandise) & operating Expenses (including employees)	(764,000)	
Interest paid	(28,000)	
Income tax paid	(38,000)	
Cash (out flow)		(830,000)
Net cash flow from Operating Activities		50,000

Note that net income reported on Income Statement Rs.65,000 and net cash flow from Operating Activities Rs.50,000. What are the reasons for difference of Rs.15,000? Reasons are: depreciation expense (reduces net income but not cash) and adjustments made to net sales, cost of goods sold and expenses, and non operating gains & losses (these affect cash flow relating to Investing & Financing Activities)

Lesson-17

FINANCIAL STATEMENTS (Continued)

Cash flow from Investing Activities: Much information is obtained from changes in related Asset Accounts.

Purchase & Sale of Marketable Securities (AI No: 1) Dr in Marketable Securities A/C shows Purchases, and hence cash outflow of Rs.65, 000. Cr of Rs.44, 000 in the A/C shows sale and hence cash inflow. Income Statement shows loss of Rs.4, 000 on these sales. Therefore cash proceeds from sales = Rs.40, 000 i.e. 44,000 – 4,000 (loss).

Loans made to borrowers (AI No: 2) Dr in Notes Receivable shows Loans given and hence outflow of Rs.17, 000. Cr in Notes Receivable shows Loans collected and hence cash inflow of Rs.12, 000.

It should be re-emphasized that the amount involved here is on account of Principal of loans. Interest, as already stated is credited to Interest Revenue Account and is included in Operating Activities.

Cash paid to acquire plants (AI No: 3)

Cash paid to acquire new plants shows cash outflow (160,000); sale of plant assets with book value of Rs.44, 000 shows cash Inflow. Income statement shows gain of Rs.31, 000 on this. This means that cash proceeds from sale of plant assets amounted to Rs.75, 000/-.

Investing Activities' portion of cash flow statement would be:-

Purchase of Marketable securities	(65,000)	
Loans made to borrowers	(17,000)	
Purchase of plant assets	(160,000)	
		(242,000)
Proceeds from sale of securities	40,000	
Collection of Loans	12,000	
Proceeds from sale of plant assets	75,000	127,000
Net cash flow from Investing Activities		(115,000)

Cash flow from financing Activities (A 1 No.1 to 5)

Proceeds from short-term borrowings in lieu of Notes Payable show cash inflow of Rs.45, 000. Payments to settle debts shows cash outflow of Rs.55, 000/-. Proceeds from issuing bonds show cash inflow of Rs.100,000 and proceeds from issuing capital stock also show cash inflow of Rs.50,000 (1000 shares x Rs.50/share) Dividend paid, of course involves cash outflow of Rs.40,000.

Financing Activities' portion of cash flow statement would be:
Rs. _____

Proceeds from short-term borrowings	45,000	
Proceeds from issuing bonds payable	100,000	
Proceeds from issuing capital stock	50,000	195,000
Payment to settle short-term debts	(55,000)	
Dividends paid	(40,000)	(95,000)
Net cash flow from financing activities		100,000

Net increase (decrease) in cash

Rs. _____

Net cash flow from Operating Activities	50,000
Net cash flow from Investing Activities	(115,000)
Net cash flow from Financing Activities	100,000
Net increase (decrease) in cash	35,000
Cash & Cash equivalent beginning of the year	40,000
Cash & Cash equivalent end of the year	75,000 (tallies with the first item on ===== Additional Information Sheet)

Note that net cash flow from Operating Activities is Rs.50, 000 against net income of Rs.65, 000 shown on Income Statement.

MOOSA CORPORATION

Statement of Cash Flows

For the Year Ended June 30, _____

Cash Flows from operating activities:		Rs.
Cash received from customers	870,000	
Interest and dividends received	10,000	
Cash provided by operating activities		880,000
Cash paid to suppliers and operating expenses.....	(764,000)	
Interest paid	(28,000)	
Income taxes paid	(38,000)	
Cash disbursed for operating activities		(830,000)
Net cash flow from operating activities		50,000
Cash flows from investing activities:		
Purchases of marketable securities	(65,000)	
Proceeds from sales of marketable securities	40,000	
Loans made to borrowers	(17,000)	
Collections on loans	12,000	
Purchases of plants assets	(160,000)	
Proceeds from sales of plant assets	75,000	
Net cash used by investing activities.....		(115,000)
Cash flows from financing activities:		
Proceeds from short-term borrowing	45,000	
Payments to settle short-term debts	(55,000)	
Proceeds from issuing bonds payable	100,000	
Proceeds from issuing capital stock	50,000	
Dividends paid	(40,000)	
Net cash provided by financing activities.....		100,000
Net increase (decrease) in cash		35,000
Cash and cash equivalents, beginning of year		40,000
Cash and cash equivalents, end of year		75,000

Lesson-18

NOTES TO FINANCIAL STATEMENTS (Continued)

Notes to Financial Statements:

These are integral part of the Financial Statements, which provide summary of accounting policies, adopted by Management in preparation of Accounts and preparing Financial Statements there from. These also present details about particular accounts (e.g. inventory, investments etc). Notes to Financial Statements also include other information e.g. leasing arrangements, pending legal proceedings, income taxes etc.

Information by segment for firms with several lines of business is also given in these Notes.

Notes to the accounts are the explanatory notes of all the items shown in the profit and loss account and the balance sheet. It is the requirement of the Companies Ordinance and the International Accounting Standards. Following are explained in Notes to the accounts:

- Nature of business of the company
- Accounting Policies of the company
- Details and explanation of items given in the Profit and Loss Account and Balance Sheet.

Accounting Policies

The two major areas of Accounting Policies are Inventory and Depreciation of Plant Assets.

Inventory: This consists of items held for sale or used in manufacture of products that would be sold. Inventory in merchandising business consists of goods owned and held for sale. This is called Merchandise. Inventory in manufacturing business consists of three parts i.e. raw material, work-in-process and finished goods. Inventory is an Asset which is shown at cost in balance sheet.

Inventory Accounting Policies

Before we discuss Accounting Policies regarding Inventory, let us discuss the following three types of maintaining and recording inventory:-

- a) **Perpetual inventory system.** This is most widely used: In this, the transactions are recorded as they occur. The flow would be as follows:-

Purchase of Merchandise	→	Dr. Current Assets “Inventory”	→	Merchandise sold	→	Dr. Cost of good sold	→	Cr. Inventory
		Cr. Cash or A/C payable				Cr. Revenue		Dr. Cash or A/C Receivable

In a perpetual inventory system, merchandising transactions are recorded as they occur. The system draws its name from the fact that the accounting records are kept perpetually up-to-date. Purchase of merchandise is recorded by debiting an asset account entitled inventory. When merchandise is sold, two entries are necessary: One to recognize the revenue earned and the second to recognize the related cost of goods sold. This second entry also reduces the balance of inventory account to reflect the sale of some of the company's inventory.

A perpetual inventory system uses an inventory subsidiary ledger. This ledger provides company personnel with up-to-date information about each type of product that the company buys and sells, including the per-unit cost and the number of units purchased, sold, and currently on hand.

- b) **Periodic inventory system:** In this case, accounting records are updated periodically – usually at year's end: "Cost of goods sold" is also determined at year's end. The flow in this case would be as follows:-

Purchase of Merchandise → Dr. Purchase A/C → Merchandise sold → No entry for "cost of goods sold" or inventory. This is done at years end.

Cr. Cash or
A/C Payable

Cr. Revenue Dr. Cash or A/C
Receivable

Complete physical inventory is taken at year's end as follows:-

Opening balance (year's beginning)		12,000
+ Purchases.	130,000	
Inventory available.	142,000	
Less closing balance (year's end).		8,000
Inventory used/sold.	134,000	

This i.e. Rs.134, 000 is "cost of goods sold", charged to Income Statement, and closing inventory is Rs.8, 000 recorded on balance sheet. Both entries are recorded at year's end.

Assumptions under this method are that all units of inventory were acquired at the same unit costs. "Taking physical inventory" at or near year-end also takes into account Inventory Shrinkage (breakage, spoilage, theft), which is written off to Income Statement in the form of "losses".

A periodic inventory system is an alternative to a perpetual inventory system. In a periodic inventory system, no effort is made to keep up-to-date records of either the inventory or the cost of goods sold. Instead, these amounts are determined only periodically, usually at the end of each year.

A traditional periodic inventory system operates as follows. When merchandise is purchased, its cost is debited to an account entitled purchases, rather than to the inventory account. When merchandise is sold, an entry is made to recognize the sales revenue, but no entry is made to record the cost of goods sold or to reduce the balance of the inventory account. As the inventory records are not updated as transactions occur, there is no inventory subsidiary ledger.

The foundation of the periodic inventory system is the taking of a complete physical inventory at year-end. This physical count determines the amount of inventory appearing in the balance sheet. The cost of goods sold for the entire year then is determined by a short computation.

- c) **Just in time (JIT) Inventory System.** In this case, the purchase of merchandise or raw materials and component parts is done just in time for sale or for use in manufacture; often a few hours, before the manufacture or sale. It involves completing the manufacturing process just in time to dispatch finished goods. It reduces money "tied-up" in inventory of raw material and finished goods. There is no need to maintain large inventory storage facilities. But the disadvantage is that delay in arrival of raw material may halt operations.

Just-in-time (JIT) inventory systems are not a simple method that a company can adopt; it has a whole philosophy that the company must follow in order to avoid its downsides. The ideas in this philosophy come from many different disciplines including statistics, industrial engineering, production management and behavioral science. In the JIT inventory philosophy there are views with respect to how inventory is looked upon, what it says about the management within the company, and the main principle behind JIT. Inventory is seen as incurring costs, or waste, instead of adding value, contrary to traditional thinking. This does not mean to say that JIT is unaware that removing inventory exposes manufacturing issues. Under the philosophy, businesses are encouraged to eliminate inventory that doesn't compensate for manufacturing issues, and to constantly improve processes so that inventory can be removed. Secondly, allowing any stock habituates the management to stock and it can then be a bit like a narcotic. Management is then tempted to keep stock there to hide problems within the production system. These problems include backups at work centers, machine reliability, and process variability, lack of flexibility of employees and equipment, and inadequate capacity among other things.

In short, the just-in-time inventory system is all about having “the right material, at the right time, at the right place, and in the exact amount” but its implications are broad for the implementers.

Criticisms

Shocks

JIT emphasizes inventory as one of the seven wastes, and as such its practice involves the philosophical aim of reducing input buffer inventory to zero. Zero buffer inventories means that production is not protected from exogenous (external) shocks. As a result, exogenous shocks reducing the supply of input can easily slow or stop production with significant negative consequences.

Transaction Cost Approach

JIT reduces inventory in a firm, however unless it is used throughout the supply chain, then it can be proposed that firms are simply outsourcing their input inventory to suppliers.

Implementation

Effects

Some of the initial results at vehicle manufacturing company were horrible, but in contrast to that a huge amount of cash appeared, apparently from nowhere, as in-process inventory was built out and sold. This by itself generated tremendous enthusiasm in upper management.

Another surprising effect was that the response time of the factory fell to about a day. This improved customer satisfaction by providing vehicles usually within a day or two of the minimum economic shipping delay.

Also, many vehicles began to be built to order; completely eliminating the risk they would not be sold. This dramatically improved the company's return on equity by eliminating a major source of risk.

Benefits

As most companies use an inventory system best suited for their company, the Just-In-Time Inventory System (JIT) can have many benefits resulting from it. The main benefits of JIT are listed below.

1. Set up times is significantly reduced in the warehouse. Cutting down the set up time to be more productive will allow the company to improve their bottom line to look more efficient and focus time spent on other areas that may need improvement.

2. The flows of goods from warehouse to shelves are improved. Having employees focused on specific areas of the system will allow them to process goods faster instead of having them vulnerable to fatigue from doing too many jobs at once and simplifies the tasks at hand.
3. Employees who possess multiple skills are utilized more efficiently. Having employees trained to work on different parts of the inventory cycle system will allow companies to use workers in situations where they are needed when there is a shortage of workers and a high demand for a particular product.
4. Better consistency of scheduling and consistency of employee work hours. If there is no demand for a product at the time, workers don't have to be working. This can save the company money by not having to pay workers for a job not completed or could have them focus on other jobs around the warehouse that would not necessarily be done on a normal day.
5. Increased emphasis on supplier relationships. No company wants a break in their inventory system that would create a shortage of supplies while not having inventory sit on shelves. Having a trusting supplier relationship means that you can rely on goods being there when you need them in order to satisfy the company and keep the company name in good standing with the public.
6. Supplies continue around the clock keeping workers productive and businesses focused on turnover. Having management focused on meeting deadlines will make employees work hard to meet the company goals to see benefits in terms of job satisfaction, promotion or even higher pay.

Lesson-19

NOTES TO FINANCIAL STATEMENTS (Continued)

Charging Costs of Inventory to Income Statement

This is also known as cost flows of inventory. Inventory units may be acquired at different costs because of different purchase dates or different suppliers. Question is: Which of these costs are to be used as “cost of goods sold”?

Purchase/ Manufacture Cost of inventory	→ Balance sheet current assets.	→ sale of goods	→ cost of Good sold (?)	→ Income Statement
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Measuring “cost of goods sold” involves valuation and pricing of Inventory and this is determined by Inventory Accounting Policies.

As an example consider that 2 ACs were purchased in January @ Rs.20, 000 each, and 3 @ Rs.25, 000 each in February. One AC was sold in March. What would be the cost of goods sold: Rs.20, 000 or Rs.25, 000?

Two approaches can be adopted in this case i.e. specific identification and cost-flow assumptions. Either is acceptable but an approach once selected, is to be applied consistently.

In specific identification approach, the Units are identified specifically, which clearly shows as to which particular unit is being sold and what was its cost, which would be its “cost of goods sold”.

A Note on the Impact of Inventory Levels on Net Income

Fluctuations in inventory levels can cause profit variations when inventory is valued according to GAAP standards. GAAP standards require that all manufacturing costs must be capitalized in inventory regardless of whether the costs are variable or fixed.

The inclusion of fixed costs in the unit cost causes profits to rise as inventory levels raise because the fixed cost in inventory is stored on the balance sheet instead of being carried over to the income statement. When the inventory level falls, this fixed cost that has been stored on the balance sheet is moved over to the income statement thereby causing net profit to fall.

To illustrate this phenomenon I first present a one month income statement constructed using only variable costs in inventory (in this case, materials only).

Sales	\$1,837,380
Cost of materials	458,000
Margin	1,379,380
Expenses	
Labor	224,000
Overhead	344,288

Depreciation	270,000	
Administrative	210,000	
Marketing	175,000	
Total expenses		1,223,288
Profit before taxes		156,092
Income taxes @ 35%		54,632
Net Profit		\$101,460

Computation of Unit Values

Sales			Flow	
	Valves	Pumps	Controllers	Total
Units	7,500	12,500	4,000	24,000
Selling Price	\$57.78	\$81.26	\$97.07	\$1,837,380
Material cost	16.00	20.00	22.00	458,000
Unit margin	41.78	61.26	75.07	
Total margin	\$313,350	\$765,750	\$300,280	\$1,379,380

Next I show two income statements for two months with the identical sales as in the first income statement that uses only variable costs in inventory. However, in these two income statements the inventory levels change; in the Month 1 statement the inventory of Valves rises by 1,000 units, and in the Month 2 statement Valve inventory falls by 1,000 units.

Month 1

	Valves	Pumps	Flow Controllers	Total
Unit Sales	7,500	12,500	4,000	24,000
Units Produced	8,500	12,500	4,000	25,000
Ending Inv.	1,000	0	0	1,000
Unit cost	37.75	48.87	100.57	
Sales Price	\$57.78	\$81.26	\$97.07	
Dollar sales	433,350	1,015,750	388,280	1,837,380

Income Statement

Sales	\$1,837,380
Cost of goods sold	
Begin inv.	0
Costs added	
Materials	474,000
Labor	155,600
Overhead	682,688
Total costs added	1,312,288

Goods available	1,312,288	
Ending inv. 1,000	37,749	
Cost of goods sold		1,274,539
Gross Profit		562,841
Administrative	210,000	
Marketing	175,000	
Total expenses		385,000
Profit before taxes		177,841
Income taxes @ 35%		62,244
Net Profit		\$115,597

Month 2

	Valves	Pumps	Flow Controllers	Total
Unit Sales	7,500	12,500	4,000	24,000
Units Produced	6,500	12,500	4,000	23,000
Unit cost	37.75	48.87	100.57	
Sales Price	\$57.78	\$81.26	\$97.07	
Dollar sales	433,350	1,015,750	388,280	1,837,380

Income Statement

Sales		\$1,837,380
Cost of goods sold		
Begin inv.	37,749	
Costs added		
Materials	442,000	
Labor	155,600	
Overhead	682,688	
Total costs added	1,280,288	
Goods available	1,318,037	
Ending inv. 0	0	
Cost of goods sold		1,318,037
Gross Profit		519,343
Administrative	210,000	
Marketing	175,000	
Total expenses		385,000

Profit before taxes	134,343
Income taxes @ 35%	47,020
Net Profit	\$87,323

Notice how the net incomes changed from one month to the next even though sales remained the same. This example used activity based costs for costing the units of product, but any costing method that assigns fixed costs to units will give the same result.

To more clearly show why the incomes differ, consider the following table that shows variable unit costs and the unit fixed costs assigned to the units by the ABC costing system.

	Valves	Pumps	Flow Controllers
ABC unit cost	\$37.75	\$48.87	\$100.57
Unit variable cost	16.00	20.00	22.00
Fixed cost per unit	21.75	28.87	78.57
Times	x		
Inventory change in units	1,000		
Equals--Difference in pre-tax income	\$21,749		
Profit before taxes--unit	\$156,092		
variable costs			
Profit before taxes--ABC	177,841		
unit costs Month 1			
Difference in profit before taxes	(21,749)		
Profit before taxes--unit	\$156,092		
variable costs			
Profit before taxes--ABC	134,343		
unit costs Month 2			
Difference in profit before taxes	\$21,749		

The difference between the net income before taxes for the income statement with variable costs and the one with the ABC costs is always explained by the unit change in inventory multiplied by the fixed overhead per unit.

Inventory Errors and Financial Statements

Income statement effects

An incorrect inventory balance causes an error in the calculation of cost of goods sold and, therefore, an error in the calculation of gross profit and net income. Left unchanged, the error has the opposite effect on cost of goods sold, gross profit, and net income in the following accounting period because the first accounting period's ending inventory is the second period's beginning inventory. The total cost of goods sold, gross profit, and net income for the two periods will be

correct, but the allocation of these amounts between periods will be incorrect. Since financial statement users depend upon accurate statements, care must be taken to ensure that the inventory balance at the end of each accounting period is correct. The chart below identifies the effect that an incorrect inventory balance has on the income statement

	Impact of Error on		
Error in Inventory	Cost of Goods Sold	Gross Profit	Net Income
Ending Inventory			
Understated	Overstated	Understated	Understated
Overstated	Understated	Overstated	Overstated
Beginning Inventory			
Understated	Understated	Overstated	Overstated

Balance sheet effects

An incorrect inventory balance causes the reported value of assets and owner's equity on the balance sheet to be wrong. This error does not affect the balance sheet in the following accounting period, assuming the company accurately determines the inventory balance for that period.

	Impact of Error on		
Error in Inventory	Assets =	Liabilities +	Owner's Equity
Understated	Understated	No Effect	Understated
Overstated	Overstated	No Effect	Overstated

Financial Statements with Inventory

The statement of owner's equity and the statement of cash flows are the same for merchandising and service companies. Except for the inventory account, the balance sheet is also the same. But a merchandising company's income statement includes categories that service enterprises do not use. A single-step income statement for a merchandising company lists net sales under revenues and the cost of goods sold under expenses.

Lesson-20

**NOTES TO FINANCIAL STATEMENTS
(Continued)**

In cost-flow assumptions, three methods for measuring “cost of good sold”, under GAAP are used.

In these three methods, assumptions are made as to the sequence in which units were withdrawn from inventory. The three flow assumptions are:-

- i. Average cost: Values all merchandise (units sold and in balance) at the Average per-unit cost, under the assumption of random withdrawal of inventory units. Average cost in the above example: Rs.23, 000 per AC. That would be the cost of goods sold. Ending Inventory to be recorded on balance sheet would also take into account this figure of reduction in Inventory.
- ii. **First-in-First - out (FIFO):** goods sold are assumed to be the first units that were purchased.
- iii. **Last-in-First-Out (LIFO):** units sold are assumed to be those which were most recently acquired.

During Inflation, FIFO shows less expense on income statement and higher inventory valuation on balance sheet and values ending inventory at current cost, whereas LIFO shows higher expenses on income statement and lower inventory valuation on balance sheet.

It should be noted that Inventory valuation significantly affects both b/sheet and income statements. Each valuation method/cost-assumption produces different results in financial statements and tax returns.

Valuation of Stock

Any manufacturing organization purchases different material through out the year. The prices of purchases may be different due to inflationary conditions of the economy. The question is, what item should be issued first & what item should be issued later for manufacturing. For this purpose, the organization has to make a policy for issue of stock. All the issues for manufacturing and valuation of stock are recorded according to the policy of the organization. Mostly these three methods are used for the valuation of stock:

- First in first out (FIFO)
- Last in first out (LIFO)
- Weighted average

First in first out (FIFO)

The FIFO method is based on the assumption that the first merchandise purchased is the first merchandised issued. The FIFO uses actual purchase cost. Thus, if merchandise has been purchased at several different costs, the inventory (stock) will have several different cost prices. The cost of goods sold for a given sales transaction may involve several different cost prices.

Characteristics

- This is widely used method for determining values of cost of goods sold and closing stock.
- In the FIFO method, oldest available purchase costs are transferred to cost of goods sold. That means the cost of goods sold has a lower value and the profitability of the organization becomes higher.
- As the current stock is valued at recent most prices, the current assets of the company have the latest assessed values.

Last in first out (LIFO)

As the name suggests, the LIFO method is based on the assumption that the recently purchased merchandise is issued first. The LIFO uses actual purchase cost. Thus, if merchandise has been purchased at several different costs, the inventory (stock) will have several different cost prices. The cost of goods sold for a given sales transaction may involve several different cost prices.

Characteristics

- This is alternatively used method for determining values of cost of goods sold and closing stock.
- In the LIFO method recent available purchase costs are transferred to cost of goods sold. That means the cost of goods sold has a higher value and the profitability of the organization becomes lower.
- As the current stock is valued at oldest prices, the current assets of the company have the oldest assessed values.

Weighted average method

When weighted average method is in use, the average cost of all units in inventory, is computed after every purchase. This average cost is computed by dividing the total cost of goods available for sale by the number of units in inventory. Under the average cost assumption, all items in inventory are assigned the same per unit cost. Hence, it does not matter which units are sold; the cost of goods sold is always based on current average unit cost.

Characteristics

- Under the average cost assumption, all items in inventory are assigned same per unit cost (the average cost). Hence it does not matter which units are sold first. The cost of goods sold is always on the current average unit cost.
- Since all inventories are assigned same cost, this method does not make any effect on the profitability and does not increase/decrease any asset in the financial statements.
- This is the alternatively used method for determining values of cost of goods sold and closing stock.

Example

- Receipts:
 - 01 Jan 20--, 10 units @ Rs. 150 per unit
 - 02 Jan 20--, 15 units @ Rs. 200 per unit
 - 10 Jan 20--, 20 units @ Rs. 210 per unit
- Issues:
 - 05 Jan 20--, 05 units
 - 06 Jan 20--, 10 units

■ 15 Jan 20--, 15

FIFO Method of Stock Valuation

Date	Receipts	Issues	Value of Stock
01-01-20--	10 @ Rs. 150		10 x 150 = 1500
02-01-20--	15 @ Rs. 200		10 x 150 = 1500 15 x 200 = 3000 4500
05-01-20--		5 @ 150 = 750 750	5 x 150 = 750 15 x 200 = 3000 3750
06-01-20--		5 @ 150 = 750 5 @ 200 = 1000 1750	0 x 150 = 0 10 x 200 = 2000 2000
10-01-20--	20 @ Rs. 210		10 x 200 = 2000 20 x 210 = 4200 6200
15-01-20--		10 @ 200 = 2000 5 @ 210 = 1050 3050	0 x 200 = 0 15 x 210 = 3150 3150

Weighted Average Method of Stock Valuation

Date	Receipts	Issues	Value of Stock	Average Cost
01-01-20--	10x150 = 1500		1500	1500/10=150
02-01-20--	15x200 = 3000		1500 + 3000 = 4500	4500/25=180
05-01-20--		5x180 = 900	4500 – 900 = 3600	3600/20=180
06-01-20--		10x180 = 1800	3600 – 1800 = 1800	1800/10=180
10-01-20--	20x210 = 4200		1800 + 4200 = 6000	6000/30=200
15-01-20--		15x200 = 3000	6000 – 3000 = 3000	3000/15=200

Effects of valuation method on profit

FIFO Method

- Cost of Sales = 750 + 1750 + 3050 = 5,550
- Gross Profit = 7500 – 5550 = 1,950

Weighted Average Method

- Cost of Sales = 900 + 1800 + 3000 = 5,700
- Gross Profit = 7500 – 5700 = 1,300

Illustration

XYZ Company is a manufacturing concern. Following is the receipts & issues record for the month of May, 2002

Date	Receipts	Issues
May 7	200 units @ Rs. 50/unit	
May 9		60 units
May 13	150 units @ Rs. 75/unit	
May 18	100 units @ Rs. 60/unit	
May 22		150 units
May 24		100 units
May 27	100 units @ Rs. 50/unit	
May 30		200 units

Calculate the value of closing stock by

- FIFO Method
- Average Method

Solution**Valuation of Stock by FIFO Method**

Date	Receipts	Issues	Value of Stock	Total Amount	Remaining No. of units	Net Balance
May 7	200 units @ Rs. 50/unit		200 x 50 = 10,000	10,000	200	10,000
May 9		60 units @ Rs. 50/unit	60 x 50 = 3,000	(3,000)	140	7,000
May 13	150 units @ Rs. 75/unit		75 x 150 = 11,250	11,250	290	18,250
May 18	100 units @ Rs. 60/unit		60 x 100 = 6,000	6,000	390	24,250
May 22		140 units @ Rs. 50/unit 10 units @ Rs. 75/unit	50 x 140 = 7,000 10 x 75 = 750	(7,750)	240	16,500
May 24		100 units @ Rs. 75/unit	75 x 100 = 7,500	(7,500)	140	9,000
May 27	100 units @ Rs. 50/unit		50 x 100 = 5,000	5,000	240	14,000
May 30		40 units @ Rs. 75/unit 100 units @ Rs. 60/unit 60 units @ Rs. 50/unit	75 x 40 = 3,000 60 x 100 = 6,000 50 x 60 = 3,000	(12,000)	40	2,000

Valuation of Stock by Weighted Average Method:

Date	Receipts	Issues	Value of Stock	Total Amount(Rs.)	Total Units	Average Cost(Rs.)/unit	Net Balance (Rs.)
May 7	200 units @ Rs. 50/unit		200 x 50 = 10,000	10,000	200	50	10,000
May 9		60 units	60 x 50 = 3,000	(3,000)	140		7,000
May 13	150 units @ Rs. 75/unit		150 x 75 = 11,250	7,000+11,250 = 18,250	140+150=290	18,250/290=62.9	18,250
May 18	100 units @ Rs. 60/unit		100 x 60 = 6,000	18,250+6,000 = 24,250	290+100 = 390	24,250/390 = 62.2	24,250
May 22		150 units	150 x 62.2 = 9,330	(9,330)	390-150 = 240		14,920
May 24		100 units	100 x 62.2 = 6,220	(6,220)	240-100 = 140		8,700
May 27	100 units @ Rs. 50/unit		100 x 50 = 5,000	8,700+5,000 = 13,700	140+100 = 240	13,700/240 = 57.1	13,700
May 30		200 units	200 x 57.1 = 11,420	(11,420)	240-200 = 40		2,280

Lesson-21

**NOTES TO FINANCIAL STATEMENTS
(Continued)****Depreciation Accounting Policies**

Depreciation is the expired or used portion of a fixed asset during an accounting period. This is taken into account to achieve the matching principle of matching revenues earned during an accounting period with the expenses incurred during that period. Since plant assets have useful life spreading over a number of accounting periods, the portion used in one accounting period is charged to Income Statement of that accounting period in the form of Depreciation Expense.

Land is recorded at cost, other fixed assets are recorded at Book Value i.e. cost less accumulated depreciation. For this, separate Depreciation Expense and Accumulated Depreciation Accounts for different plant assets are maintained. It must also be noted that depreciation is a process of cost allocation and not a process of valuation as such.

Computing Depreciation

Different methods are available for computing depreciation of fixed assets. Different methods can be used for different assets. However, comparison among firms with different depreciation methods becomes difficult because of the fact that each firm uses different methods for calculating depreciation, which ultimately affect its net income and balance sheet.

Methods of Computing Depreciation

- i) **Straight-line method:** In this, the depreciation expenses are spread evenly over periods. Assume that a plant asset is acquired for Rs.17, 000. It is estimated that its useful life is five years and residual value (salvage value) at the end of five years is Rs.2, 000.

Depreciation is a systematic allocation of the cost of a depreciable asset to expense over its useful life. It is a process of charging the cost of fixed asset to profit & loss account.

Fixed Assets are those assets which are:

- Of long life
- To be used in the business to generate revenue
- Not bought with the main purpose of resale.

Fixed assets are also called “Depreciable Assets”

When an expense is incurred, it is charged to profit & loss account of the same accounting period in which it has incurred. Fixed assets are used for longer period of time. Now, the question is how to charge a fixed asset to profit & loss account. For this purpose, estimated life of the asset is determined. Estimated useful life is the number of years in which a fixed asset is expected to be used efficiently. It is the life for which a machine is estimated to provide more benefit than the cost to run it. Then, total cost of the asset is divided by total number of estimated years. The value, so determined, is called ‘depreciation for the year’ and is charged to profit & loss account. The same amount is deducted from total cost of fixed asset in the financial year in which depreciation is charged. The net amount (after deducting depreciation) is called ‘Written down Value’.

$WDV = \text{Original cost of fixed asset} - \text{Accumulated Depreciation}$

Accumulated Depreciation is the depreciation that has been charged on a particular asset from the time of purchase of the asset to the present time. This is the amount that has been charged to profit and loss account from the year of purchase to the present year.

Depreciation accumulated over the years is called **accumulated depreciation**.

Useful Life

- Useful Life or Economic Life is the time period for machine is expected to operate efficiently.
- It is the life for which a machine is estimated to provide more benefit than the cost to run it.

Grouping of Fixed Assets

Major groups of Fixed Assets:

- Land
- Building
- Plant and Machinery
- Furniture and Fixtures
- Office Equipment
- Vehicles

No depreciation is charged for 'Land'. In case of 'Leased Asset/Lease Hold Land' the amount paid for it is charged over the life of the lease and is called **Amortization**.

Journal entries for recording Depreciation

Purchase of fixed asset:

Debit:	Relevant asset account
Credit:	Cash, Bank or Payable Account

For recording of depreciation, following two heads of accounts are used:

- Depreciation Expense Account
- Accumulated Depreciation Account

Depreciation expense account contains the depreciation of the current year. Accumulated depreciation contains the depreciation of the asset from the financial year in which it was bought up to the present financial year. . Depreciation of the following years in which asset was used is added up in this account. In other words, this head of account shows the cost of usage of the asset up to the current year. Depreciation account is charged to profit & loss account under the heading of Administrative Expenses. In the balance sheet, fixed assets are presented at written down value i.e.

$WDV = \text{Actual cost of fixed asset} - \text{Accumulated Depreciation}$.

Journal entry for the depreciation is given below:

Debit:	Depreciation Expenses Account
Credit:	Accumulated Depreciation Account

Presentation of Depreciation

Charging depreciation to any head in profit & loss account depends upon the nature of work performed by the asset. Consider an organization has purchased computers. If computers are being used by the management, this means that administrative work is done by computers. So, depreciation of computers will be charged to Administrative Expenses. On the other hand, if machines working in the factory are computerized. The value of depreciation of the computers attached with the machines will be charged to cost of goods sold. The reason being, the computers are the part of manufacturing process & depreciation of computers will be charged to the cost of production. Again consider the selling department of the business is very large. Depreciation of computers used in selling department will be charged to selling expenses.

You can see that computer is a single asset and its depreciation is charged in three different heads depending upon the nature of work done by the computer.

Depreciation for the year is charged to:

- i. Cost of Goods Sold
- ii. Administrative Expenses
- iii. Selling Expenses

In balance sheet Fixed Assets are shown at Cost less Accumulated Depreciation i.e. written Down Value (WDV).

Methods of calculating Depreciation

There are several methods for calculating depreciation. At this stage, we will discuss only two of them namely:

- Straight line method or Original cost method or Fixed installment method
- Reducing balance method or Diminishing balance method or written down method.

Straight Line Method

Under this method, a fixed amount is calculated by a formula. That fixed amount is charged every year irrespective of the written down value of the asset. The formula for calculating the depreciation is given below:

$$\text{Depreciation} = (\text{cost} - \text{Residual value}) / \text{Expected useful life of the asset}$$

Residual value is the cost of the asset after the expiry of its useful life.

Under this method, at the expiry of asset's useful life, its written down value will become zero. Consider the following example:

- Cost of the Asset = Rs.100,000
- Life of the Asset = 5 years
- Annual Depreciation = 20 % of cost or Rs.20,000

Written down value method

- Cost of the Asset = Rs. 100,000
- Annual Depreciation = 20%
 - Year 1 Depreciation = 20 % of 100,000 = 20,000

■ Year 1 WDV	= 100,000 – 20,000	= 80,000
■ Year 2 Depreciation	= 20 % of 80,000	= 16,000
■ Year 2 WDV	= 80,000 – 16,000	= 64,000

Illustration:

Cost of an asset: Rs. 120,000

Residual value: Rs. 20,000

Expected life: Rs. 5 years

Calculate depreciation and the written down value of the asset for five years.

Solution**Straight line method**

$$\text{Depreciation} = (120,000 - 20,000) / 5 = \text{Rs. } 20,000$$

Particulars	Depreciation (Rs)	Written Down Value (Rs.)
Depreciable cost		100,000
Dep. Of the 1 st year	(20,000)	80,000
Dep. Of the 2 nd year	(20,000)	60,000
Dep. Of the 3 rd year	(20,000)	40,000
Dep. Of the 4 th year	(20,000)	20,000
Dep. Of the 5 th year	(20,000)	0

Reducing Balance Method

Under this method, depreciation is calculated on written down value. In the first year, depreciation is calculated on cost. Afterwards written down value is calculated by deducting accumulated depreciation from the cost of that asset (cost – accumulated depreciation) and depreciation is charged on that value. In this method, the value of asset never becomes zero. Consider the following example:

Cost of an asset Rs. 100,000

Expected life Rs. 5 years

Depreciation rate 20%

Solution

Particulars	Depreciation (Rs)	Accumulated Depreciation (Rs.)	Written Down Value (Rs.)
Depreciable cost			100,000
Dep. Of the 1 st year			
100,000 x 20%	20,000	20,000	80,000

Dep. Of the 2 nd year 80,000 x 20%	16,000	36,000	64,000
Dep. Of the 3 rd year 64,000 x 20%	12,800	48,800	51,200
Dep. Of the 4 th year 51,200 x 20%	10,240	59,040	40,960
Dep. Of the 5 th year 40,960 x 20%	8,192	67,232	32,768

You see, at the end of five years, WDV of the asset is Rs. 32,768, not zero. But in case of straight line method, the WDV, after five years was zero. So, in the opinion of some people, reducing balance method is better than that of straight line method, but both methods are effective. It is the management that has to decide, which method is best suited to their business.

Once an asset has been fully depreciated, no more depreciation should be recorded on it, even though the property may be in good condition and may be in use. The objective of depreciation is to spread the cost of an asset over the periods of its usefulness; in no case can depreciation be greater than the amount paid for the asset. When a fully depreciated asset is in use beyond the original estimate of useful life, the asset account and the accumulated depreciation account should remain in the accounting records without further entries until the asset is retired.

Reducing Balance Method

In this method, depreciation is calculated on written down value. In the first year, depreciation is calculated on cost. Afterwards written down value is calculated by deducting accumulated depreciation from the cost of that asset (cost – accumulated depreciation) and depreciation is charged on that value.

Cost of Asset – Price at which the asset was initially recorded

Written Down Value / Book Value – Cost minus Accumulated Depreciation.

In reducing balance method, a formula is used for calculation the depreciation rate i.e.

$$\text{Rate} = 1 - \sqrt[n]{RV / C}$$

Where:

“RV” = Residual Value

“C” = Cost

“n” = Life of Asset

Calculate the rate if:

Cost	= 100,000
Residual Value (RV)	= 20,000
Life	= 3 years

$$\begin{aligned} \text{Rate} &= 1 - \sqrt[3]{20000/100000} \\ &= 42\% \end{aligned}$$

Year 1

Cost	100,000
Depreciation	100,000 x 42% (42,000)

WDV (Closing Balance)	58,000
Year 2	
WDV (Opening Balance)	58,000
Depreciation 58,000 x 42%	(24,360)
WDV (Closing Balance)	33,640
Year 3	
WDV (Opening Balance)	33,640
Depreciation 33,640 x 42%	(14,128)
WDV (Closing Balance)	19,511

Disposal of Asset

Cost of Asset	= 100,000
Life of the Asset	= 5 Years
Depreciation Method	= Straight Line
Residual Value	= Rs.10000
Sale Price after Five Years	= Rs.15000

Depreciation per year = $(100000 - 10000) / 5$
= Rs.5000 per year

Total Depreciation in Five Years = $18,000 \times 5$
= 90,000

Book Value after Five Years = $100,000 - 90,000$
= 10,000

Profit on Disposal = $15,000 - 10,000$
= Rs.5000

Recording of Disposal

Debit	Fixed Asset Disposal A/c	100,000
Credit	Fixed Asset Cost A/c	100,000
	(With the cost of asset)	
Debit	Accumulated Dep. A/c	90,000
Credit	Fixed Asset Disposal A/c	90,000
	(With the depreciation accumulated to date)	
Debit	Cash / Bank / Receivable A/c	15,000
Credit	Fixed Asset Disposal A/c	15,000
	(With the price at which asset is sold)	

[Note: one group to appear at a time]

Disposal of Asset Account

Fixed Asset Disposal Account			
Debit		Credit	
Cost Account	100,000	Acc. Dep. Account	90,000
		Cash / Bank	15,000
P & L Account (Balancing Figure)	5000		
Total	105000	Total	105000

Policy for Depreciation

The management of the business selects the policy for charging depreciation. There is no law binding on the management. The management is free to choose method of depreciation and policy of charging depreciation. Normally two policies are commonly used:

- Depreciation on the basis of use
- In the year of purchase, full year's depreciation is charged; where as, in the year of sale no depreciation is charged.

Now it is up to the management to decide, what method and what policy is better and effective for their business.

Disposal of Fixed Asset

When depreciable asset is disposed off at any time during the financial year, an entry should be made to give effect of the disposal. Since, the residual value of asset is only estimated; it is common for asset to be sold at price that differs from its book value at the date of disposal. When asset is sold, any profit or loss is computed by comparing book value with the amount received from sale. As you know, book value is obtained by deducting accumulated depreciation from original cost of the asset. A sale price in excess of the book value produces profit; a sale price below the book value produces loss. This profit or loss should be shown in the profit & loss account.

Entries for Recording Disposal

Debit	Fixed Asset Disposal A/c
Credit	Fixed Asset Cost A/c (With the cost of asset)
Debit	Accumulated Dep. A/c
Credit	Fixed Asset Disposal A/c (With the depreciation accumulated to date)
Debit	Cash / Bank / Receivable A/c
Credit	Fixed Asset Disposal A/c (With the price at which asset is sold)

Example

- An asset is purchased for Rs. 500,000 on Nov. 01, 2001.
- Depreciation rate is 10% p.a.
- The Asset is sold on Apr. 30, 2004.
- Financial Year is July 1 to June 30

Question

- Calculate the WDV For both policies Depreciation is charged on the Basis of Use

Year	On the Basis of Use	Rs.
1-11-2001	Cost	500,000
2001-2002	Dep. $500,000 \times 10\% \times 8 / 12$	(33,333)
30-6-2002	WDV	466,667
2002-2003	Dep. $466,666 \times 10\%$	(46,667)
30-6-2003	WDV	420,000
2003-2004	Dep. $420,000 \times 10\% \times 10 / 12$	(35,000)
30-4-2004	WDV	385,000

Full Depreciation in the Year of Purchase

Year	Full Dep. in year of Purchase	Rs.
1-11-2001	Cost	500,000
2001-2002	Dep. $500,000 \times 10\%$	(50,000)
30-6-2002	WDV	450,000
2002-2003	Dep. $450,000 \times 10\%$	(45,000)
30-6-2003	WDV	405,000
2003-2004	Dep. 00 in the year of sale	00
30-6-2004	WDV	405,000

Contents of Fixed Assets Register

- Different record for each class of assets
- Date of purchase
- Detailed particulars of asset
- Location of asset
- Record of depreciation

Illustration

Cost of asset

Rs. 200,000

Life of the asset 5 years
 Depreciation method Straight line
 Residual value Rs. 20,000
 Sale price after 5 years 30,000

Calculate profit/Loss on the sale of the asset?

Solution

Written down value = 200,000 – 20,000 = 180,000

Depreciation/year = 180,000/5 = 36,000 (Straight line method)

Particulars	Depreciation (Rs)	Written Down Value (Rs.)
Depreciable cost		200,000
Dep. Of the 1 st year	(36,000)	164,000
Dep. Of the 2 nd year	(36,000)	128,000
Dep. Of the 3 rd year	(36,000)	92,000
Dep. Of the 4 th year	(36,000)	56,000
Dep. Of the 5 th year	(36,000)	20,000

Book value after five years Rs. 20,000
 Sale price Rs. 30,000
 Profit on sale Rs. 10,000 (30,000 – 20,000)

Same illustration is solved by reducing balance method

Cost of asset Rs. 200,000
 Residual value Rs. 20,000
 Estimated useful life 5 years

Calculation of depreciation rate

$$\begin{aligned}\text{Depreciation Rate} &= 1 - \sqrt[n]{\text{Rv/c}} \\ &= 1 - \sqrt[5]{20,000/200,000} \\ &= 37\%\end{aligned}$$

Allocation of depreciation is given below:

Particulars	Depreciation (Rs)	Accumulated Depreciation (Rs.)	Written Down Value (Rs.)
Depreciable cost			200,000
Dep. Of the 1 st year 200,000 x 37%	74,000	74,000	126,000
Dep. Of the 2 nd year 126,000 x 37%	46,620	120,620	79,380
Dep. Of the 3 rd year 79,380 x 37%	29,371	149,991	50,009
Dep. Of the 4 th year 50,009 x 37%	18,503	168,494	31,506
Dep. Of the 5 th year 31,506 x 37%	11,657	180,151	19,849

Book value after five years

Rs. 19,849

Sale price

Rs. 30,000

Profit on sale

Rs. 10,151 (30,000 – 19,849)

If an asset is not completed at that time when balance sheet is prepared, all costs incurred on that asset up to the balance sheet date are transferred to an account called **Capital Work in Progress Account**. This account is shown separately in the balance sheet below the fixed asset. Capital work in progress account contains all expenses incurred on the asset until it is converted into working condition. All these expenses will become part of the cost of that asset. When an asset is completed and it is ready to work, all costs in the capital work in progress account will transfer to the relevant asset account through the following entry:

Debit:	Relevant asset account
Credit:	Capital work in progress account

Illustration # 1

A machine is purchased for Rs. 400,000. Its useful life is estimated to be five years. Its residual value is Rs. 25,000. After four years, it was sold for Rs. 40,000. For the purpose of WDV, its depreciation rate is 40%.

You are required to show calculation of depreciation for four years. Also calculate profit or loss on disposal.

Solution

Calculation of depreciation and profit & loss on the basis of straight line method:

Depreciation/year = $(400,000 - 25,000)/5 =$ (Straight line method)

As, machine was sold after four years but its useful life was estimated for five years, when we calculate depreciation of the asset under straight line method, we will divide its WDV over five years, not on four years.

Particulars	Depreciation (Rs)	Written Down Value (Rs.)
Depreciable cost		375,000
Dep. Of the 1 st year	(75,000)	300,000
Dep. Of the 2 nd year	(75,000)	225,000
Dep. Of the 3 rd year	(75,000)	150,000
Dep. Of the 4 th year	(75,000)	75,000

Book value after four years	Rs. 75,000 + 25,000 = 100,000
Sale price	Rs. 40,000
Profit/(loss) on sale	Rs. (60,000) i-e.(40,000 – 100,000)

Calculation of depreciation and profit & loss on the basis of reducing balance method:

Depreciation rate = 40%

Particulars	Depreciation (Rs)	Accumulated Depreciation (Rs.)	Written Down Value (Rs.)
Depreciable cost			400,000
Dep. Of the 1 st year 400,000 x 40%	160,000	160,000	240,000
Dep. Of the 2 nd year 240,000 x 40%	96,000	256,000	144,000
Dep. Of the 3 rd year 144,000 x 40%	57,600	313,600	86,400
Dep. Of the 4 th year 86,400 x 40%	34,560	348,160	51,840

Book value after four years	Rs. 51,840
Sale price	Rs. 40,000
Profit/ (loss) on sale	Rs. (11,840) i-e. $(40,000 - 51,840)$

Illustration # 2

Following information of machinery account is available in Year 2004:

- Machine # 1 is purchased on September 1, 2000 for Rs. 100,000
- Machine # 2 is purchased on January 31, 2002 for Rs. 200,000
- Machine # 3 is purchased on July 1, 2003 for Rs. 50,000
- Machine # 1 is disposed on March 31, 2004

Depreciation is charged @ 25% reducing balance method. Financial year is closed on June 30 every year.

Show the calculation of depreciation on machinery for four years using the following policies:

- Depreciation is charged on the basis of use

- Full depreciation is charged in the year of purchase and no depreciation is charged in the year of disposal.

Solution**Depreciation on the basis of use**

Date	Purchase of machine (Rs.)	Depreciation (Rs.)	Accumulated depreciation (Rs.)	Total Accum. Dep.	Written Down Value (Rs.)	Total Written Down Value (Rs.)
01-09-2000	100,000	Machine # 1 $100,000 \times 25\% \times 10/12 = \mathbf{20,833}$	Machine # 1 20,833	20,833	Machine # 1 79,167	79,167
2001-2002	200,000	Machine # 1 $79,167 \times 25\% = \mathbf{19,792}$	Machine # 1 40,625	61,458	Machine # 1 59,375	238,542
31-01-2002		Machine # 2 $200,000 \times 25\% \times 5/12 = \mathbf{20,833}$	Machine # 2 20,833		Machine # 2 179,167	
2002-2003		Machine # 1 $59,375 \times 25\% = \mathbf{14,844}$	Machine # 1 55,469	121,094	Machine # 1 44,531	178,906
		Machine # 2 $179,167 \times 25\% = \mathbf{44,792}$	Machine # 2 65,625		Machine # 2 134,375	
2003-2004	50,000	Machine # 1 $44,531 \times 25\% \times 9/12 = \mathbf{8,350}$	Machine # 1 63,819	175,538	Machine # 1 (36,181) (sold)	138,281
01-07-2003		Machine # 2 $134,375 \times 25\% = \mathbf{33,594}$	Machine # 2 99,219		Machine # 2 100,781	
		Machine # 3 $50,000 \times 25\% = \mathbf{12,500}$	Machine # 3 12,500		Machine # 3 37,500	

Full year depreciation in the year of purchase and no depreciation in the year of sale:

Date	Purchase of machine (Rs.)	Depreciation (Rs.)	Accumulated depreciation (Rs.)	Total Accum. Dep.	Written Down Value (Rs.)	Total Written Down Value (Rs.)
01-09-2000	100,000	Machine # 1 $100,000 \times 25\%$ =25,000	Machine # 1 25,000	25,000	Machine # 1 75,000	75,000
2001-2002		Machine # 1 $75,000 \times 25\%$ = 18,750	Machine # 1 43,750	93,750	Machine # 1 56,250	206,250
31-01-2002	200,000	Machine # 2 $200,000 \times 25\%$ =50,000	Machine # 2 50,000		Machine # 2 150,000	
2002-2003		Machine # 1 $56,250 \times 25\%$ = 14,063	Machine # 1 57,813	145,313	Machine # 1 42,187	154,687
		Machine # 2 $150,000 \times 25\%$ =37,500	Machine # 2 87,500		Machine # 2 112,500	
2003-2004		Machine # 1 0	Machine # 1 57,813	185,935	Machine # 1 42,187	121,875
		Machine sold	(sold)		(sold)	
		Machine # 2 $112,500 \times 25\%$ = 28,125	Machine # 2 115,625		Machine # 2 84,375	
01-07-2003	50,000	Machine # 3 $50,000 \times 25\%$ = 12,500	Machine # 3 12,500		Machine # 3 37,500	

If an asset is not completed at that time when balance sheet is prepared, all costs incurred on that asset up to the balance sheet date are transferred to an account called **Capital Work in Progress Account**. This account is shown separately in the balance sheet below the fixed asset. Capital work in progress account contains all expenses incurred on the asset until it is converted into working condition. All these expenses will become part of the cost of that asset. When any expense is incurred or paid, it is included in the Capital Work in Progress Account through the following entry:

Debit:	Work in Progress Account
Credit:	Cash/Bank/Payable Account

When an asset is completed and it is ready to work, all costs will transfer to the relevant asset account through the following entry:

Debit:	Relevant asset account
Credit:	Capital work in progress account

Presentation

It is already mentioned that Work in Progress Account is shown separately in the balance sheet below the fixed asset. i.e.

Name of the Entity		
Balance Sheet		
As At.....		
Particulars	Amount Rs.	Amount Rs.
Assets		
Fixed Assets		xyz
Capital Work in Progress		xyz
Other Long Term Assets		xyz
Current Assets		
Total		Xyz
Liabilities		
Capital	xyz	
Profit	xyz	Xyz
Long Term Liabilities		Xyz
Current Liabilities		
Total		Xyz

Consider the solved illustration in the previous lecture:

Depreciation on the basis of use

Date	Purchase of machine (Rs.)	Depreciation (Rs.)	Accumulated depreciation (Rs.)	Total Accum. Dep.	Written Down Value (Rs.)	Total Written Down Value (Rs.)
01-09-2000	100,000	Machine # 1 $100,000 \times 25\% \times 10/12 = \mathbf{20,833}$	Machine # 1 20,833	20,833	Machine # 1 79,167	79,167
2001-2002	200,000	Machine # 1 $79,167 \times 25\% = \mathbf{19,792}$	Machine # 1 40,625	61,458	Machine # 1 59,375	238,542
31-01-2002		Machine # 2 $200,000 \times 25\% \times 5/12 = \mathbf{20,833}$	Machine # 2 20,833		Machine # 2 179,167	
2002-2003		Machine # 1 $59,375 \times 25\% = \mathbf{14,844}$	Machine # 1 55,469	121,094	Machine # 1 44,531	178,906
		Machine # 2 $179,167 \times 25\% = \mathbf{44,792}$	Machine # 2 65,625		Machine # 2 134,375	

2003-2004		Machine # 1 44,531x25%x 9/12= 8,350	Machine # 1 63,819	175,538	Machine # 1 (36,181) (sold)	138,281
		Machine # 2 134,375x25% = 33,594	Machine # 2 99,219		Machine # 2 100,781	
01-07-2003	50,000	Machine # 3 50,000x25% = 12,500	Machine # 3 12,500		Machine # 3 37,500	

Presentation in Balance Sheet

Year	Cost of Machinery	Accumulated Depreciation	Written Down Value
2000-2001	100,000	20,833	79,167
2001-2002	300,000	61,458	238,542
2002-2003	300,000	121,094	178,906

Written down Value of the year 2003-2004

Opening Written Down Value:	178,906
Add: Cost of machine purchased:	50,000
Less: Depreciation of Machine # 1 in 2003-2004:	(8,350)
Less: Depreciation of other assets:	(46,094)
Less: Written Down Value of machine disposed:	(36,181)
Closing Written Down Value:	138,281

Full year depreciation in the year of purchase and no depreciation in the year of sale:

Date	Purchase of machine (Rs.)	Depreciation (Rs.)	Accumulated depreciation (Rs.)	Total Accum. Dep.	Written Down Value (Rs.)	Total Written Down Value (Rs.)
01-09-2000	100,000	Machine # 1 100,000 x 25% = 25,000	Machine # 1 25,000	25,000	Machine # 1 75,000	75,000
2001-2002		Machine # 1 75,000x25% = 18,750	Machine # 1 43,750	93,750	Machine # 1 56,250	206,250
31-01-2002	200,000	Machine # 2 200,000x25% = 50,000	Machine # 2 50,000		Machine # 2 150,000	
2002-2003		Machine # 1 56,250x25% = 14,063 Machine # 2 150,000x25% = 37,500	Machine # 1 57,813 Machine # 2 87,500	145,313	Machine # 1 42,187 Machine # 2 112,500	154,687
2003-2004		Machine # 1 0 Machine sold Machine # 2 112,500x25% = 28,125 Machine # 3 50,000x25% = 12,500	Machine # 1 57,813 (sold) Machine # 2 115,625 Machine # 3 12,500	185,935	Machine # 1 42,187 (sold) Machine # 2 84,375 Machine # 3 37,500	121,875
01-07-2003	50,000					

Presentation in the Balance Sheet

Year	Cost of Machinery	Accumulated Depreciation	Written Down Value
2000-2001	100,000	25,000	75,000
2001-2002	300,000	93,750	206,250
2002-2003	300,000	145,313	154,687

Written down Value of the year 2003-2004

Opening Written Down Value:	Rs. 154,687
Add: Cost of machine purchased:	Rs. 50,000
Less: Depreciation of Machine # 1 in 2003-2004:	0
Less: Depreciation of other assets:	(40,625)
Less: Written Down Value of machine disposed:	(42,187)
Closing Written Down Value:	Rs. 121,875

Illustration # 2

Following information of machinery account is available in Year 2004:

- Machine # 1 is purchased on August 1, 2000 for Rs. 50,000
- Machine # 2 is purchased on April 1, 2002 for Rs. 100,000
- Machine # 3 is purchased on March 1, 2004 for Rs. 150,000
- Machine # 1 is disposed on May 31, 2004

Depreciation is charged @ 20% reducing balance method. Financial year is closed on June 30 every year.

Show the calculation of depreciation on machinery for four years using the following policies:

- Depreciation is charged on the basis of use
- Full depreciation is charged in the year of purchase and no depreciation is charged in the year of disposal,

Solution**Depreciation on the basis of use**

Date	Purchase of machine (Rs.)	Depreciation (Rs.)	Accumulated depreciation (Rs.)	Total Accum. Dep.	Written Down Value (Rs.)	Total Written Down Value (Rs.)
01-08-2000	50,000	Machine # 1 $50,000 \times 20\% \times 11/12 = 9,167$	Machine # 1 9,167	9,167	Machine # 1 9,167	40,833
2001-2002 01-04-2002	 100,000	Machine # 1 $40,833 \times 20\% = 8,167$ Machine # 2 $100,000 \times 20\% \times 3/12 = 5,000$	Machine # 1 17,334 Machine # 2 5,000	22,334	Machine # 1 32,666 Machine # 2 95,000	127,666
2002-2003		Machine # 1 $32,666 \times 20\% = 6,533$ Machine # 2 $95,000 \times 20\% = 19,000$	Machine # 1 23,867 Machine # 2 24,000	47,867	Machine # 1 26,133 Machine # 2 76,000	102,133
2003-2004 01-03-2004	 150,000	Machine # 1 $26,133 \times 20\% \times 11/12 = 4,791$ Machine # 2 $76,000 \times 20\% = 15,200$ Machine # 3 $150,000 \times 20\% \times 4/12 = 10,000$	Machine # 1 28,658 Machine # 2 39,200 Machine # 3 10,000	77,858	Machine # 1 (21,342) (sold) Machine # 2 60,800 Machine # 3 140,000	200,800

Presentation in the Balance Sheet

Year	Cost of Machinery	Accumulated Depreciation	Written Down Value
2000-2001	50,000	9,167	40,833
2001-2002	150,000	22,334	127,666
2002-2003	150,000	47,867	102,133

Written Down Value of the year 2003-2004

Opening Written Down Value:	Rs. 102,133
Add: Cost of machine purchased:	Rs. 150,000
Less: Depreciation of Machine # 1 in 2003-2004:	(4,791)
Less: Depreciation of other assets:	(25,200)
Less: Written Down Value of machine disposed:	(21,342)
Closing Written Down Value:	Rs. 200,800

Full year depreciation in the year of purchase and no depreciation in the year of sale:

Date	Purchase of machine (Rs.)	Depreciation (Rs.)	Accumulated depreciation (Rs.)	Total Accum. Dep.	Written Down Value (Rs.)	Total Written Down Value (Rs.)
01-08-2000	50,000	Machine # 1 50,000 x 20% = 10,000	Machine # 1 10,000	10,000	Machine # 1 40,000	40,000
2001-2002		Machine # 1 40,000x20% = 8,000	Machine # 1 18,000	38,000	Machine # 1 32,000	112,000
01-04-2002	100,000	Machine # 2 100,000x20% = 20,000	Machine # 2 20,000		Machine # 2 80,000	
2002-2003		Machine # 1 32,000x20% = 6,400 Machine # 2 80,000x20% = 16,000	Machine # 1 24,400 Machine # 2 36,000	60,400	Machine # 1 25,600 Machine # 2 64,000	89,600
2003-2004		Machine # 1 0 Machine sold Machine # 2 64,000x20% = 12,800 Machine # 3 150,000x20% = 30,000	Machine # 1 24,400 (sold) Machine # 2 48,800 Machine # 3 30,000	103,200	Machine # 1 (25,600) (sold) Machine # 2 51,200 Machine # 3 120,000	171,200
01-03-2004	150,000					

Presentation in the Balance Sheet

Year	Cost of Machinery	Accumulated Depreciation	Written Down Value
2000-2001	50,000	10,000	40,000
2001-2002	150,000	38,000	112,000
2002-2003	150,000	60,400	89,600

Written Down Value of the year 2003-2004

Opening Written Down Value:	Rs. 89,600
Add: Cost of machine purchased:	Rs. 150,000
Less: Depreciation of Machine # 1 in 2003-2004:	0
Less: Depreciation of other assets:	(42,800)
Less: Written Down Value of machine disposed:	(25,600)
Closing Written Down Value:	Rs. 171,200

Revaluation of Fixed Assets

Fixed assets are purchased to be used for longer period. In the subsequent years, the value of asset could be higher or lower than its present book value due to inflationary condition of the economy. Assets are valued at Historical Cost in the books of accounts. Historical Cost is the original cost of the asset at which it was purchased plus additional costs incurred on the asset to bring it in working condition. Sometimes, the management of the business, if it thinks fit, revalues the asset to present it on current market value. Once the asset is revalued to its market value, then its value has to be constantly monitored to reflect the changes in the market value.

If an asset is revalued at higher cost than its original cost, the excess amount will be treated as profit on revaluation of fixed assets and it is credited to Revaluation Reserve Account.

On the other hand, if an asset is revalued at lower cost than its original cost, the balance amount will be treated as loss on revaluation of fixed assets and it is shown in the profit & loss account of that year in which asset was revalued.

Lesson-22

NOTES TO FINANCIAL STATEMENTS (Continued)

Depreciation expenses for year would be: =cost-(estimated) Residual value = 17,000-2000 = 3000

*(Estimated years of useful life-5)

- ii) **Accelerated-Depreciation method:** In this method higher depreciation rate is charged in early years and lower rate in later years. Since new plants are most efficient in early years, matching principle demands that higher depreciation may be charged in earlier years.

Depreciation = Book Value x Accelerated Dep. Rate

Example: Taking the above case of plant asset acquired for Rs.17, 000

Year	Depreciation	Accumulated Depreciation	Book Value
1	17,000 X 40% 6800	6800	10200
2.	10,200 X 40% 4080	10880	6120
3.	6,120 X 40% 2448	13328	3672
4.	3,672 X 40% 1469	14797	2203
5.	2,203 X 40% 881 (reduced to 203)	15000	2000

Note that since total depreciation in five years is Rs.15, 000 (Rs.17, 000 – 2,000), the depreciation for the last year is reduced from 881 to 203 to bring the total depreciation amount in 5 years to Rs.17, 000.

Principles of disclosure and Consistency of Accounting Methods. This is the basic concept underlying reliable financial statements, i.e. consistently following the Inventory valuation/ pricing and Depreciation calculation Methods. Disclosure of the Accounting methods used, in Balance Sheet or in the Notes is also an essential requirement of Disclosure Principle. If however, Accounting Method (s) are changed disclosure must be made of reasons for such change, and of the effect of change upon the company's net income.

Annual Report Generated By Business

Annual Report is part of Financial Reporting Process which contains Financial Statements, Notes to financial statements, Auditors' Report, Five-year summary of key financial and non-financial data, and Management's discussion and analysis of operations (MD&A).

Auditor's Report

Audit of financial statements is independent of the business issuing these. Financial Statements preparation is Management's responsibility, whereas expressing opinion as to their fairness is the Auditor's responsibility, Audit Report is issued along with financial statements to persons outside the business. It provides assurance to outside users about the completeness and reliability (not necessarily accuracy) of Financial Statements.

Auditor is hired by the company being audited. Usually a Management letter is also issued by Auditors to Company's management, recommending steps for improving company's internal control structures.

Fairness' in the context of Auditor's Report means that financial statements are not misleading. Audit is conducted according to Generally Accepted Auditing Standards. During Audit, the Auditors obtain reasonable assurance that financial statements are free of "material" misstatements. Audit is conducted by examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. It assesses the accounting principles used and significant estimates made by management. It must also be noted that Audit's purpose is to determine fairness of financial statements and not to detect frauds, as such. In the context of materiality, it is to be noted that an item is material if knowledge of this might reasonably be expected to influence user's decisions. Also to be noted is the fact an auditor can also make errors like a physician does in diagnosis.

End product of every audit is the auditor's report. An audit involves collection of audit evidence about the truth and fairness of financial statements or other proposition under review. By careful examination of the evidence so called the auditor draws appropriate conclusions and forms his opinion. The auditor's report summarizes results of the work conducted by the auditor and formally communicates the auditor's opinion.

It is important to note that the auditor's report simply expresses the auditor's opinion on truth and fairness of financial statements as absolutely correct. An auditor's report is a formal statement that includes the reporting auditor's opinion formed after careful examination of books of accounts and related documents. Where as, a certificate is written conformation of absolute accuracy of the facts stated therein and does not involve any estimate or opinion.

Lesson-23**ANNUAL REPORT GENERATED BY BUSINESS****Types of auditor's opinion**

An auditor's opinion may be unqualified, qualified or adverse. In certain circumstances the auditor may disclaim an opinion i.e. states his inability to express an opinion.

Unqualified opinion

Opinion of an auditor is termed as unqualified when the auditor concludes that the financial statements give a true and fair view in accordance with the identified financial reporting framework.

There is no statutory definition of the words "true and fair". However, true and fair has been taken to mean the following: (I) free from prejudice or bias, (II) presentation of an objective picture, (III) in accordance with generally accepted accounting principles, (IV) consistent and having clarity, (V) not misleading and understandable by the reader of financial statements, (V) Presented fairly, in all material respects.

Identified financial reporting framework means the set of statutes, rules, and standards etc. That applies to the preparation and presentation and presentation of such financial statements.

According to the companies ordinance 1984, in an unqualified audit report the auditor is required to make some statutory affirmations without reservations, as prescribed in section 255(3).

In an unqualified opinion the auditor also impliedly undertakes that any changes in accounting principles or in the method of their application, and the effects thereof, have been properly determined and disclosed in the financial statements.

Modified opinion

An auditor may not be able to express an unqualified opinion. When either of the following circumstances exists and, in the auditor's judgment, the effect of which is or may be material to the financial statements:-

- (a) There is a limitation on the scope of the auditor's work; or
- (b) There is a disagreement with management regarding the acceptability of the accounting policies selected, the method of their application or the adequacy of financial statement disclosures.

The circumstances described in (a) could lead to a qualified opinion or a disclaimer of opinion. The circumstances described in (b) could lead to a qualified opinion or an adverse opinion.

(i) Qualified Opinion

Opinion of an auditor is termed as qualified opinion when the auditor concludes that an unqualified opinion cannot be expressed but that the effect of any disagreement with management, or limitation on scope is not so material and pervasive as to require an adverse opinion or a disclaimer of opinion. A qualified opinion is expressed as being 'except for' the effects of the matter to which the qualification relates.

(ii) Disclaimer of opinion

A disclaimer of opinion should be expressed when possible effect of a limitation on scope of audit is so material and pervasive that the auditor has not been able to obtain sufficient appropriate audit evidence and accordingly is unable to express an opinion on the financial statements

(iii) Adverse opinion.

An adverse opinion should be expressed when the effect of a disagreement is so material and pervasive to the financial statements that the auditor concludes that a qualification of the report is not adequate to disclose the misleading or incomplete nature of the financial statements.

Auditor's Report, Opinion/Certificate: There are four types of Audit certificates.

- i) Unqualified: It states that Financial Statements present information in conformity with GAAP.
- ii) Qualified: It qualifies the Report with certain observations.
- iii) Adverse: It states that financial statements have not been presented fairly in accordance with GAAP.
- iv) Disclaimer: Auditor expresses his inability to report on Financial Statements for various reasons.

Statements of Audit Reports

“Un-qualified Audit Certificate/Opinion”: We have examined the accounts/financial statements of _____ up to the year ended 30th June, _____, and other record based on these accounts and we got all the information required by us. In our opinion the financial statements and the accounts on which they are based have been prepared in conformity with generally accepted accounting principles, and present a true and fair position of the affairs of _____.

“Qualified Audit Certificate/Opinion”: We have examined the accounts of _____ up to the year ended 30th June, _____ and other record based on these accounts and we got all the information required by us. In our opinion the financial statements and the accounts on which they are based have generally been prepared in conformity with the generally accepted accounting principles, and these present a true and fair position of the affairs of _____ subject to the observations and findings mentioned in the enclosed report.

“Adverse Audit Certificate/Opinion”: We have examined the accounts of _____ up to the year ended 30th June, _____ and other record based on these accounts and we got all the information required by us. In our opinion the financial statements and the accounts on which they are based have not been prepared in conformity with generally accepted accounting principles, and these do not present a true and fair position of the affairs of _____ because of the errors mentioned in the enclosed report.

Disclaimer of opinion: We are unable to issue an audit certificate on the accounts of _____ for the period _____, as we could not verify the financial statements and the accounts on which they are based due to non-availability of the necessary information or because of our inability to visit (Locations) or due to the non-cooperation by the auditee staff in providing the necessary records (name the documents).

Another form of Audit Report is as follows:-**To the Stockholders and Board of Directors of MOOSA & CO.**

We have audited the accompanying balance sheet of Moosa & Co as of June 30, 20 ____, and the related statements of income, retained earnings, and cash flow for the year then ended.

We conducted our audit in accordance with generally accepted auditing standards.

We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Moosa & Co as of June 30, 20____, and the results of its operations and its cash flows for the year then ended in conformity with generally accepted accounting principles.

Peshawar
September 29, 20____

Signature
Certified Chartered Accountant

Lesson-24

**ANNUAL REPORT GENERATED BY BUSINESS
(Continued)****Five-Year Summary:**

This is also a very important part of Annual Report prepared by the management of a corporation. It offers quick look at some overall trends, and it includes net sales or operating revenues, income/loss from continuing operations, total assets, long-term obligations and cash dividend per common share.

Management Discussion & Analyses (MD&A)

This last part of the Annual Report is also labeled as 'Financial Review'. It contains information that cannot be found in the financial data e.g. internal/external sources of liquidity, any material deficiencies in liquidity and suggested remedial measures, commitments for capital expenditure and sources of funding, and anticipated changes in the mix and cost of financing resources.

MD&A records events causing material changes in cost/revenue relationships e.g. future price increase. It also gives breakdown of sales increases in price and volume components, and also gives explanation about why changes have occurred in profitability and liquidity.

Quality of Financial Reporting

Ideally, financial statements should reflect an accurate picture of the financial position and performance of a business, and should convey information useful to assess the past and predict the future. However discretion/potential exists within GAAP to "manipulate/window-dress" the financial statements.

Opportunities for management to affect the quality of financial statements are available in the form of Accounting Policies, Estimates i.e. choices, (of Accounting Policies) and changes (of Accounting Policies and Estimates). There is also opportunity to Management for timing of Revenues and Expenses. Since Matching process requires matching revenues and expenses of a particular accounting period, it gives the management, discretion regarding timing of expenses. For example, management may postpone expenditures for many items like Advertisement/marketing, Repairs/Maintenance, and Research & Development and Capital expansion; in order to "window-dress" its financial statements.

Limitations of Financial Statements

Financial Statements assume constant real-value of money. It should be noted that net income is not absolutely accurate and precise, since assumptions, estimations & approximations are involved as regards estimated useful life of plant assets, their residual value etc. Events not measurable objectively are not reflected in Income Statement. Also the Financial Statements give no "valuation" as such of the enterprise because assets are valued on "going-concern assumption", and the fixed assets are valued at Book Value which may be more or less than realizable market value.

Financial Statements have the limitation that assessment of future profitability is not possible by reading these. Future profitability depends on a number of factors e.g. quality of products, activities of competitors, general economic situation etc., a picture of which cannot emerge from financial statements.

Financial Statements thus give limited picture of an enterprise in monetary terms, without taking into account outside non-monetary factors.

One other limitation of Financial Statements is that information is not available in financial statements about employees' relations with management, morale/efficiency of employees, reputation/public perception of the enterprise, effectiveness of management team and potential exposure to regulatory changes. These impact operational results but are difficult to quantify from Financial Statements.

Different accounting practices can distort comparisons. As noted earlier, inventory valuation and depreciation methods can affect financial statements and thus distort comparisons among firms. Also, if one firm leases a substantial amount of its productive equipment, its assets may appear low relative to sales because leased assets often do not appear on the balance sheet, at the same time, the liability associated with the lease obligation may not be shown as a debt. Therefore leasing can artificially improve both the turnover and the debt ratios. However accounting professional has taken steps to reduce this problem.

Financial accounting deals with the **preparation of financial statements**, namely, *Income statement, Statement of changes in owner's equity, Balance sheet and Statement of Cash flows*.

These financial statements enable users of accounting information to make informed decisions about a company's performance. In order to make decisions, the information presented must be

Relevant (useful for the purpose of decision making)

Reliable (verifiable)

However, some people argue that due to the rules that accountants use, financial statements are not as useful as they could be.

Types of Businesses:

- Service
- Merchandise
- Manufacturing

Limitations of Financial Statements

Limitation # 1

Assets on the balance sheet are always shown at the original purchase price (historical cost) even though the current value may be different.

Example: XYZ Company started their business five years ago and at that time; they purchased some land for Rs. 200,000. Today, the same land is worth Rs. 500,000. However, the land will be shown on the balance sheet at Rs. 200,000.

Implication: The value of the land is not realistic.

Limitation # 2

Some figures on the financial statements are based on subjective estimates and assumptions. Management could possibly change net income by changing these estimates.

Depreciation is one example where estimates and assumptions are used.

Definition of Depreciation

Depreciation is the **loss in value** of assets as the assets are used to generate revenue. Depreciation is an expense.

Example: XYZ Company is in the business of manufacturing 'ball-point' pens. It needs a special machine to make these pens. This machine is used continuously for 20 hours everyday.

The cost of this machine is Rs. 100,000. It is expected to last for 5 years after which it needs to be replaced.

The machine will lose value each year as it is used to produce pens. These pens are sold to generate revenue for the company.

Therefore, this loss in value or depreciation is considered to be an expense of the business.

Different depreciation methods

Calculation of depreciation is an estimate. There are many methods used to calculate depreciation.

Two most common examples are:

Straight line method

Declining/Reducing balance method

Straight line depreciation method

In this method, the "amount of depreciation" (loss in value) is the **same every year**.

The reasoning behind this is that the firm gets equal benefits over the useful life of the asset.

How to calculate?

Depreciation =
$$\frac{\text{Original cost} - \text{salvage value}}{\text{Number of years of useful life}}$$

Salvage value is the amount of money that you would receive if you sold the asset at the end of its useful life. The useful life is the length of time that you expect to use the asset.

Both the salvage value and the number of years of useful life are estimates.

Example:

A firm has purchased a machine for Rs.100, 000. It is expected to last for 5 years. At the end of its life, it has zero salvage value.

Rs.100, 000 – Rs.0

Depreciation = ----- = **Rs. 20,000**

Therefore, each year the firm shows depreciation (loss in value) of this machine as Rs. 20,000.

Implications:

- 1. Different depreciation methods and estimates will give different net income figures.**
- 2. The value of assets shown in the balance sheet will also differ depending on the depreciation method and the estimates used.**

Limitation # 3

There are certain other items which are not reported in the balance sheet even though the firm may consider them to be of considerable value.

Examples

Image/reputation of the firm

The value of its human resources (people)

Summary

Financial statements have always been prepared with the emphasis of being

Relevant & reliable to the various users of accounting information.

In spite of trying to be relevant and reliable, there are certain limitations:

1. Historical accounting methods have a tendency to **undervalue the assets** of the firm.
2. Different depreciation methods and estimates will report **different net income figures** in the income statement and **different value of assets** in the balance sheet.
3. There are certain assets which are not reported in the balance sheet such as the **image / reputation** of the firm or the **value of a firm's human resources** causing the value of the company to appear to be lower than it actually is.

Lesson-25

TYPES OF BUSINESS

There are usually three types of Business: **service enterprise**, **merchandise** (sale and purchase) enterprise, and **manufacturing enterprises**.

TYPES OF BUSINESS ORGANIZATIONS:

Corresponding to three types of business, there are three types of business organizations viz Sole Proprietorship, Partnership firm and Public Limited Companies or Corporations.

Different combinations of businesses and business organizations can occur. For example, a sole proprietor can have a manufacturing business or a big corporation can indulge in service enterprise.

GAAP apply to financial statements of all the three types of business and business organizations.

Sole Proprietorship:

It is owned by one person (often acting as manager as well). Examples would be small retail stores, farms, service business and professional practices (law, medicine etc). Accounts of business are however separate from personal accounts of the owner. Legally, the business and owner are not separate. It is unincorporated business in which there is personal liability of owner for debts of business. Creditors look to solvency of owner, rather than financial position of business.

Owner is personally liable for all business obligations. If the organization is sued, the proprietor as an individual is sued and has unlimited liability, which means that much of his or her personal property, as well as the assets of the business, may be seized to settle claims. Another problem with a sole proprietorship is the difficulty in raising capital. Because life and success of the business is so dependent on a single individual, a sole proprietorship may not be as attractive to lenders as another form of organization. Moreover, the proprietorship has certain tax disadvantages. In addition to these drawbacks, the proprietorship form makes the transfer of ownership more difficult than does the corporate form. No portion of the enterprise can be transferred to members of the family during the proprietor's lifetime. For these reasons, this form of organization does not afford the flexibility that other forms do.

Partnership:

It is unincorporated business owned by two or more persons. Owners voluntarily act as partners. Accounts of firm are separate from personal accounts of owners/partners, which mean there is personal liability of owners for debts of firm. Partnership dissolves on the death or retirements of any of its members/partners.

Disadvantages of a Partnership Firm

The Local Law restricts the number of partners in a partnership firm to twenty. If the firm needs more capital for its business, the partners may not be in a position to invest more money in the business.

Secondly, if the business of the partnership firm is very large and twenty persons can not manage it, they cannot admit new partners in the business. However, there is one exception. The partnership firm of professionals can have more than twenty partners.

At this point, need for forming a COMPANY arises.

Public Limited Companies/Corporations:

Ownership of public limited companies vests in individuals, Labour unions, banks, universities and other organizations like mutual funds etc. Ownership is through shareholding by shareholders or stockholders.

A corporation is a legal entity having existence separate and distinct from that of its owners. It is an artificial and legal person which can be sued and be sued.

Assets of the company or corporation belong to the company itself, not to owners. Creditors of the company thus have a claim against assets of the company, not against the personal property of stockholders. In other words, there is “limited” liability of shareholders; limited to the extent of their shareholding. This is because stockholders own the company but not its assets, which belong to the company itself. It is the corporation which is responsible for its debts, being a legal person.

Advantages of a Limited Company

A Limited company enjoys the following benefits:

- It can have more than twenty partners, so problem of extra capital is reduced to minimum.
- The liabilities of the members of a company is limited to the extent of capital invested by them in the company
- There are certain tax benefits to the company, which a partnership firm can not enjoy.
- In Pakistan, affairs of limited companies are controlled by COMPANIES ORDINANCE issued in 1984.
- The formation of a company and other matters related to companies are governed by SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN (SECP).

Types of Companies

There are two major types of the companies:

- Private limited companies
- Public limited companies

Private Limited Companies

Following are the main characteristics of private limited companies:

- Number of members in a private limited company ranges from two to fifty.
- Words and parentheses “(Private) Limited” are added at the end of the name of a private limited company. Example: ABC (Private) Limited.
- Private limited company can not offer its shares to general public at large.
- In case a shareholder decides to sell his shares, his shares are first offered to existing shareholders. If all existing shareholders decide not to purchase these shares, only then, an outsider can buy them.
- The shareholders of the private limited company elect two members of the company as Directors.
- These directors form a board of directors to run the affairs of the company.
- The head of board of directors is called “chief executive”.

Public Limited Company

Following are the main characteristics of public limited companies:

- Minimum number of members in a public limited company is **seven**

- There is no restriction on the maximum number of members in a public limited company.
- Word “Limited” is added at the end of the name of a public limited company. Example: ABC Limited.
- Public limited company can offer its shares to general public at large.
- The shareholders of the public limited company elect seven members of the company as Directors.
- These directors form a board of directors to run the affairs of the company.
- The head of board of directors is called “chief executive”.

There are two types of public limited company:

- Listed Company
- Non Listed Company

Listed Company

Listed company is that company whose shares are quoted on stock exchange i.e. whose shares are traded in stock exchange. It is also called quoted company.

Non Listed Company

Non listed company is that company whose shares are not quoted on stock exchange i.e. whose shares are not traded in stock exchange.

Lesson-26

**TYPES OF BUSINESS ORGANIZATIONS
(Continued)**

There are also certain closely held companies which are small businesses, restricting ownership to a limited group of stockholders (private). They are not publicly owned.

A public limited company has perpetual existence and continuous life (through issue of transferable shares). Unlike partnerships, corporations do not dissolve at the death of any of its directors/shareholders.

Board of directors is elected by stockholders of the Corporation. Managers of business are hired and appointed by the Board. Individual stockholders can be hired for management of the business. Ownership and management of public limited companies are however separate. There can be outside directors as well.

Costs of incorporating a business as public limited company are charged to an assets account called organization or incorporation costs. These appear in balance sheets under the caption "other Assets". These are written-off over a five year period.

Incorporation of business

Approval of competent authority and listing on Stock Exchange is the first step. Approval of Corporate Law Authority under Companies Ordinance, 1984 for issue of Prospectus is also a pre-requisite to incorporation of a business as public limited company. Clearance of Prospectus by Stock Exchange is the next step. However, approval and clearance is no guarantee of correctness of Prospectus contents. Filing of Prospectus and related documents with Registrar of Companies follows. Prospectus gives interalia, objectives and operations of the entity, capital structure, Basis of Allotment of Shares etc.

Example of Capital Structure:

Authorized share capital Rs.300 m divided into 30 m shares of Rs.10 each. Capital initially proposed to be raised: initial equity capital Rs.200 m. Initial subscription by Sponsors and First Subscribers: Rs.150 m divided into 15 m share of Rs.10 each. Capital offered to public: Rs.50 m divided into 2 m shares of Rs.10 each.

Formation of a Company

In case of private limited company, any two members and in case of public limited company, any seven members can subscribe their names in Memorandum and Articles of association along with other requirements of the Companies Ordinance 1984; can apply to Security and Exchange Commission for registration of the company.

Memorandum of association:

Memorandum of association contains the following clauses:

- Name of the company with the word "Limited" as the last word of the name, in case of public limited and the parenthesis and the word "(Private Limited)" as the last word of the name, in case of private limited company.
- Place of registered office of the company.
- Objective of the company.

- Amount of share capital with which company proposes to be registered and division in to number of shares.
- No subscriber of the company shall take less than one share.
- Each subscriber of the memorandum shall write opposite to his name, the number of shares held by him.

Articles of Association

- Article of association is a document that contains all the policies and other matters which are necessary to run the business of the company.
- This is also signed by all the members of the company.

When Security and Exchange Commission is satisfied that all the requirements of the Companies Ordinance have been complied with, it issued certificate of incorporation to the company. This certificate is evidence that a separate legal entity has come in to existence.

Certificate of Incorporation/Registration

When Security and Exchange Commission of Pakistan receives application for registration of a company, the registrar of SECP makes investigation in respect of compliance with legal requirements. When he is satisfied that all legal requirements are complied with. He issues a Certificate of Incorporation/registration to the company. This certificate is evidence that a separate legal entity has formed. The company, after incorporation/Registration has the right to sue and to be sued in its own name.

Two types of stock/shareholders:

The two types of stockholders or shareholders are common and preferred shareholders.

Common stockholders have right to vote in election of directors and in other important actions e.g. mergers, acquisitions, selection of auditors, raising capital etc. They have right to receive dividends if authorized or declared by Board of Directors. No dividend is given on profit on sale of assets, or if the business goes into loss. No interest is given on unpaid dividend. Dividends are declared in General Meeting, but these should not exceed the amount recommended by Board of Directors.

Common shareholders have right over assets if company is liquidated, only after creditors and preferred shareholders are paid in full. They are therefore called residual claimants. Preferred shares have priority or preference over common stock in receiving dividends and in the event of liquidation. Dividend is fixed in this case, and does not increase with increase in earnings. Conditions of declaration of dividends by Board of Directors, however exists in this case also. Preferred stockholders have no voting rights. Preferred shares are callable or redeemable at higher price by the company issuing these. Thus these have characteristics of both debt and equity's, and are sometimes referred to as Hybrid Securities.

Lesson-27

TYPES OF BUSINESS ORGANIZATIONS
(Continued)**Authorized Share Capital**

The maximum amount with which a company gets registration/incorporation is called authorized share capital of that company.

This capital can be increased with the prior approval of security and exchange commission. This capital is further divided in to smaller denominations called shares. Each share usually has a face value equal to Rs. 10. According to Companies Ordinance, this face value can be increased but can not be decreased. The value of share written on its face is called face value or par value or nominal value

Issued Share Capital

When a company issues its shares to general public at large, the amount raised by the company with such an issue is called issued share capital. This is also called Paid up Share Capital.(total amount received by the company). Accounting entry is recorded for issued share capital; no such entry is recorded for authorized share capital.

Preliminary Expenses

All expenses incurred up to the stage of incorporation of the company are called Preliminary Expenses. All these expenses are incurred by subscribers of the company.

The maximum amount with which a company gets registration/incorporation is called authorized share capital of that company. This capital can be increased with the prior approval of security and exchange commission. This capital is further divided in to smaller denominations called **shares**. Each share usually has a face value equal to Rs. 10. According to Companies Ordinance, this face value can be increased but can not be decreased. The value of share written on its face is called **face value**.

Shares are issued for cash as well as for any asset. For example, if any member of the company sell his/her land to the company. In return, company issue him/her fully paid shares instead of paying cash. Those shares are also part of paid up capital because company has received the benefit of that amount.

Share Certificate

Share Certificate is the evidence of ownership of the number of shares held by a member of the company. When a company issue more than one share to its member, it does not issue that number of shares to him/her. Instead, it issues a certificate under the stamp of the company that a particular number of shares are issued to members of the company.

Shares Issued At Premium

When a company has a good reputation and earns huge profits, the demand of its shares increases in the market. In that case, the company is allowed by the Companies Ordinance 1984, to issue shares at a higher price than their face value. Such an issue is called Shares Issued at Premium. The amount received in excess of the face value of the shares is transferred to an account called "Share Premium Account". This account is used to:

- Write off Preliminary Expenses of the company.

- Write off the balance amount, in issuing shares on discount.
- Issue fully paid Bonus Shares.

Shares Issued On Discount

When a company is not making huge profits, rather it is sustaining loss, the demand of its shares decreases in the market. If the company needs extra funds, then it is allowed by the Companies Ordinance 1984, to issue shares at lesser price than their face value. Such an issue is called Shares Issued on discount.

The difference of face value and the amount received is met by share premium account, if available. If there is no share premium account available, this difference is shown in the profit and loss account of that period, in which shares are issued as loss on issue of shares at discount.

Capital stock: This signifies ownership of a corporation in the form of shares issued or sold for cash and sometimes in exchange of assets like land, buildings etc., and services (e.g. legal), using market value of shares issued in exchange. It includes common and preferred stock. When only one type of stock is issued, the words “common stock” is used. It is the amount invested by stockholders i.e. paid-in-capital. It is also called “Outstanding Shares” i.e. shares in the hands of stockholders.

Stockholders' equity

	Rs.
Cumulative 8% preferred stock, convertible Rs.100 par value callable or redeemable at Rs.110, authorized 20,000 shares; Issued 10,000 shares	1,000,000
Common stock Rs.10 Par/stated value, authorized 100,000 shares, Issued and outstanding 50,000 shares	500,000
Paid-in-capital Plus additional paid-in-capital+ donated Capital/assets at market value + Retained Earning (or minus accumulated losses).	1,500,000

Retained earning transferred to B/Sheet= Opening balance + Net Profit for the year – Dividends.

Additional paid-in-capital: shows excess amount received, when stock is sold for more than par value. Underwriters, (banks, investment companies etc) make profit by selling share at higher prices. Retained earnings is an element of stockholders equity, does not indicate the form in which these resources are currently held. These may have been invested in land, building, equipment or any other assets, or might have been used in liquidating debts.

Balance Sheet as on June 30

	Rs. _____
Assets	
Current assets	1,000,000
Fixed assets	1,692,000
Total assets	2,692,000

Liabilities & Stockholders' equity**Liabilities**

Current	112,000
12% long-term Notes payable	200,000
Outside liabilities	312,000
Paid-in-capital (from previous slide)	1,500,000
Additional Paid-in-Capital, Common stock	750,000
Retained earnings	130,000
Total Stockholders' equity	2,380,000
Total Liabilities & Stockholder equity	2,692,000

Dividend

Profit distributed to the share holders for their investment in the company is called Dividend. Dividend is approved by the share holders in the annual general meeting at the recommendation of the directors. Dividend is paid out of profits. If, in any year, company could not make any profit. No dividend will be paid to share holders. Dividend is paid to registered share holders of the company. Registered share holders are those members of the company, who are enlisted in the register of share holders of the company.

Subscribers / Sponsors of the Company

Subscribers / Sponsors are the persons who sign articles and memorandum of the company and contribute in the initial share capital of the company.

Issuance of Further Capital

Where a company wants to issue further capital (called raising the capital), shares are first offered to current shareholders. The issuance of further capital to Present Shareholders is called **Right Issue**. This issue is in proportion to current shares held by the shareholders. The shareholders can accept or reject the offer. If shareholders refuse to accept these shares then these are offered to other people.

Journal Entries

- Shares issued against cash

Debit:	Cash / Bank Account
Credit:	Share Capital Account

- Shares issued against transfer of asset:

Debit:	Asset Account
Credit:	Share Capital Account

This is called issuance of asset in kind.

Bonus Shares

This is another way of distributing dividend. When a company decides, not to give cash to the share holders as dividend, it issued shares called bonus shares, to the share holders for which it receives no cash. These are fully paid shares.

Financial Statements of Limited Companies

In Pakistan, Financial Statements of limited companies are prepared in accordance with:

- International accounting standards adopted in Pakistan.
- Companies Ordinance 1984.

In case of conflict the requirements of Companies Ordinance would prevail over Accounting Standards.

Components of Financial Statements

Components of companies' financial statements are as follows:

- Balance Sheet
- Profit and Loss Account
- Cash Flow Statement
- Statement of Changes in Equity
- Notes to the Accounts
- Comparative figures of Previous Period

Equity

Equity is the total of capital, reserves and undistributed profit. That means the amount contributed by share holders plus accumulated profits of the company. Equity, therefore, represents the total of shareholders fund in the company.

Statement of Changes in Equity

The statement of changes in equity shows the movement in the shareholders equity (capital and reserves) during the year. We can say that it replaces profit and loss appropriation account of partnership business.

FORMAT OF STATEMENT OF CHANGES IN EQUITY

Name of the Company					
Statement of Changes in Equity					
For Year Ended June 30, 2002					
	Share Capital	Share Premium Account	Reserves	Profit & Loss A/c	Total
Balance On Jun 30, 2000	X	X	X	X	X
Movements During the Year				X	X
Balance On Jun 30, 2001	X	X	X	X	X
Movements During the Year				X	X
Balance On June 30, 2002	X	X	X	X	X

Lesson-28

TYPES OF BUSINESS ORGANIZATIONS (Continued)

Book Values of equity/share

Common stockholders equity (for calculating book value) = Total stockholders equity – call price or redemption value of preferred stock-dividends in arrears on cumulative preferred stock.

$$= 2,380,000 - (10,000 \times 110) - 80,000 \text{ (dividend arrears)}$$

$$= 2,380,000 - 1,100,000 - 80,000 = 1,200,000$$

$$\text{Book value per share common stock} = \frac{\text{common stockholders equity} = 1,200,000}{\text{Number of common share} \quad 50,000} = \text{Rs.24}$$

Book value/share: preferred stock

$$= \frac{\text{call price/redemption value} = 1,100,000}{\text{Number of preferred share} \quad 10,000} = \text{Rs.110}$$

Par value or stated value: It is the amount below which stockholders' equity cannot be reduced (except by losses or special legal action). A dividend cannot be declared if it would cause the stockholders' equity to fall below the par value. Par value therefore provides minimum cushion of equity capital for protection of creditors. It is therefore called legal capital.

Par value, Book value and Market value of Shares are different. Par and Book values of stock are no indication of its market value. In the case of common stock, it is the investors' expectations, as to the profitability of future operations, which greatly affects the market value of common shares, although other factors also play part. Market value of common stock thus shows the investors' confidence in the management. On the other hand, market price of preferred share varies inversely with interest rate.

In financial markets, stock is the capital raised by a corporation or joint-stock company through the issuance and distribution of shares. A person or organization which holds at least a partial share of stocks is called a shareholder. The aggregate value of a corporation's issued shares is its market capitalization.

Types of stock

Common stock

Common stock also referred to as common or ordinary shares, are, as the name implies, the most usual and commonly held form of stock in a corporation. The other type of shares that the public can hold in a corporation is known as preferred stock. Common stock that has been re-purchased by the corporation is known as treasury stock and is available for a variety of corporate uses.

Common stock typically has voting rights in corporate decision matters, though perhaps different rights from preferred stock. In order of priority in a liquidation of a corporation, the owners of common stock are near the last. Dividends paid to the stockholders must be paid to preferred shares before being paid to common stock shareholders.

Preferred stock

Preferred stock, sometimes called preferred shares, have priority over common stock in the distribution of dividends and assets.

Most preferred shares provide no voting rights in corporate decision matters. However, some preferred shares have special voting rights to approve certain extraordinary events (such as the issuance of new shares, or the approval of the acquisition of the company), or to elect directors.

Dual class stock

Dual class stock is shares issued for a single company with varying classes indicating different rights on voting and dividend payments. Each kind of shares has its own class of shareholders entitling different rights.

Treasury stock

Treasury stock is shares that have been bought back from public. Treasury Stock is considered issued, but not outstanding.

Stock Derivatives

A stock derivative is any financial claim which has a value that is dependent on the price of the underlying stock. Futures and options are the main types of derivatives on stocks. The underlying security may be a stock index or an individual firm's stock, e.g. single-

Stock futures

Stock futures are contracts where the buyer, or long, takes on the obligation to buy on the contract maturity date, and the seller, or short takes on the obligation to sell. Stock index futures are generally not delivered in the usual manner, but by cash settlement.

A stock option is a class of option. Specifically, a call option is the right (not obligation) to buy stock in the future at a fixed price and a put option is the right (not obligation) to sell stock in the future at a fixed price. Thus, the value of a stock option changes in reaction to the underlying stock of which it is a derivative. The most popular method of valuing stock options is the Black Scholes model

Apart from call options granted to employees, most stock options are transferable.

Shareholder

A shareholder (or stockholder) is an individual or company (including a corporation) that legally owns one or more shares of stock in a joint stock company. Companies listed at the stock market are expected to strive to enhance shareholder value.

Shareholders are granted special privileges depending on the class of stock, including the right to vote (usually one vote per share owned) on matters such as elections to the board of directors, the right to share in distributions of the company's income, the right to purchase new shares issued by the company, and the right to a company's assets during a liquidation of the company. However, shareholder's rights to a company's assets are subordinate to the rights of the company's creditors. This means that shareholders typically receive nothing if a company is liquidated after bankruptcy (if the company had had enough to pay its creditors, it would not have entered bankruptcy), although a stock may have value after a bankruptcy if there is the possibility that the debts of the company will be restructured.

Shareholders are considered by some to be a partial subset of stakeholders, which may include anyone who has a direct or indirect equity interest in the business entity or someone with even a non-pecuniary

interest in a non-profit organization. Thus it might be common to call volunteer contributors to association stakeholders, even though they are not shareholders.

Although directors and officers of a company are bound by fiduciary duties to act in the best interest of the shareholders, the shareholders themselves normally do not have such duties towards each other.

However, in a few unusual cases, some courts have been willing to imply such a duty between shareholders. For example, in California, majority shareholders of closely held corporations have a duty to not destroy the value of the shares held by minority shareholders.

The largest shareholders (in terms of percentages of companies owned) are often mutual funds, and especially passively managed exchange-traded funds.

Application

The owners of a company may want additional capital to invest in new projects within the company. They may also simply wish to reduce their holding, freeing up capital for their own private use.

By selling shares they can sell part or all of the company to many part-owners. The purchase of one share entitles the owner of that share to literally share in the ownership of the company a fraction of the decision-making power, and potentially a fraction of the profits, which the company may issue as dividends.

In the common case of a publicly traded corporation, where there may be thousands of shareholders, it is impractical to have all of them making the daily decisions required to run a company. Thus, the shareholders will use their shares as votes in the election of members of the board of directors of the company.

In a typical case, each share constitutes one vote. Corporations may, however, issue different classes of shares, which may have different voting rights. Owning the majority of the shares allows other shareholders to be out-voted - effective control rests with the majority shareholder (or shareholders acting in concert). In this way the original owners of the company often still have control of the company.

Shareholder rights

Although ownership of 51% of shares does result in 51% ownership of a company, it does not give the shareholder the right to use a company's building, equipment, materials, or other property. This is because the company is considered a legal person, thus it owns all its assets itself. This is important in areas such as insurance, which must be in the name of the company and not the main shareholder.

Even though the board of directors runs the company, the shareholder has some impact on the company's policy, as the shareholders elect the board of directors. Each shareholder typically has a percentage of votes equal to the percentage of shares he or she owns. So as long as the shareholders agree that the management (agent) are performing poorly they can elect a new board of directors which can then hire a new management team. In practice, however, genuinely contested board elections are rare. Board candidates are usually nominated by insiders or by the board of the directors themselves, and a considerable amount of stock are held and voted by insiders.

Owning shares does not mean responsibility for liabilities. If a company goes broke and has to default on loans, the shareholders are not liable in any way. However, all money obtained by converting assets into

cash will be used to repay loans and other debts first, so that shareholders cannot receive any money unless and until creditors have been paid (most often the shareholders end up with nothing).

Means of financing

Financing a company through the sale of stock in a company is known as equity financing. Alternatively, debt financing (for example issuing bonds) can be done to avoid giving up shares of ownership of the company. Unofficial financing known as trade financing usually provides the major part of a company's working capital (day-to-day operational needs). Trade financing is provided by vendors and suppliers who sell their products to the company at short-term, unsecured credit terms, usually 30 days. Equity and debt financing are usually used for longer-term investment projects such as investments in a new factory or a new foreign market. Customer provided financing exists when a customer pays for services before they are delivered, e.g. subscriptions and insurance.

Trading

A stock exchange is an organization that provides a marketplace for either physical or virtual trading shares, bonds and warrants or other financial products where investors (represented by stock brokers) may buy and sell shares of a wide range of companies. A company will usually list its shares by meeting and maintaining the listing requirements of a particular stock exchange and the different.

Arbitrage Trading

Although it makes sense for some companies to raise capital by offering stock on more than one exchange, in today's era of electronic trading, there is limited opportunity for private investors to make profit on pricing discrepancies between one stock exchange and another. As such, arbitrage opportunities disappear quickly due to the efficient nature of the market.

Buying

There are various methods of buying and financing stocks. The most common means is through a stock broker. Whether they are a full service or discount broker, they arrange the transfer of stock from a seller to a buyer. Most trades are actually done through brokers listed with a stock exchange.

There are many different stock brokers from which to choose, such as full service brokers or discount brokers. The full service brokers usually charge more per trade, but give investment advice or more personal service; the discount brokers offer little or no investment advice but charge less for trades. Another type of broker would be a bank or credit union that may have a deal set up with either a full service or discount broker.

There are other ways of buying stock besides through a broker. One way is directly from the company itself. If at least one share is owned, most companies will allow the purchase of shares directly from the company through their investor relations departments. However, the initial share of stock in the company will have to be obtained through a regular stock broker. Another way to buy stock in companies is through Direct Public Offerings which are usually sold by the company itself. A direct public offering is an initial public offering in which the stock is purchased directly from the company, usually without the aid of brokers.

When it comes to financing a purchase of stocks there are two ways: purchasing stock with money that is currently in the buyers ownership, or by buying stock on margin. Buying stock on margin means buying stock with money borrowed against the stocks in the same account. These stocks, or collateral, guarantee

that the buyer can repay the loan; otherwise, the stockbroker has the right to sell the stock (collateral) to repay the borrowed money. He can sell if the share price drops below the margin requirement, at least 50% of the value of the stocks in the account. Buying on margin works the same way as borrowing money to buy a car or a house, using the car or house as collateral. Moreover, borrowing is not free; the broker usually charges 8-10% interest.

Selling

Selling stock is procedurally similar to buying stock. Generally, the investor wants to buy low and sell high, if not in that order (short selling); although a number of reasons may induce an investor to sell at a loss, e.g., to avoid further loss.

As with buying a stock, there is a transaction fee for the broker's efforts in arranging the transfer of stock from a seller to a buyer. This fee can be high or low depending on which type of brokerage, discount or full service, handles the transaction.

After the transaction has been made, the seller is then entitled to all of the money. An important part of selling is keeping track of the earnings. Importantly, on selling the stock, in jurisdictions that have them, capital gains taxes will have to be paid on the additional proceeds, if any, that are in excess of the cost basis.

==Stock price fluctuations The price of a stock fluctuates fundamentally due to the theory of supply and demand. Like all commodities in the market, the price of a stock is directly proportional to the demand. However, there are many factors on basis of which the demand for a particular stock may increase or decrease. These factors are studied using methods of fundamental analysis and technical analysis to predict the changes in the stock price.

Lesson-29

SUMMARY
(Previous Lectures)**Example**

- Which of the following are based upon the realization principle and the matching principle (indicate all correct answers).
 - Adjusting Entries (Matching Principle)
 - Closing Entries (Matching Principle)
 - Accrual Basis of Accounting
 - Measurement of Net Income under **GAAP** (Matching Principle)

Example

- Which of the following explains the debit and credit rules relating to recording of Revenues and Expenses:
 - Expenses appear on the left side of the balance sheet and are recorded by debits. Revenues appear on the right side of the balance sheet and are recorded by credits. (X)
 - Expenses appear on the left side of the income statement and are recorded by debits. Revenues appear on the right side of the income statement and are recorded by credits. (X)
 - The effect of revenues and expenses in the owner's equity. (Tick Correct)
 - Realization and Matching Principle. (X)

Example

- The entry to recognize Depreciation expenses (indicate all correct answers):
 - Is an application of Matching Principle? (Correct)
 - Is a closing entry. (X)
 - Usually includes an offsetting credit either to cash or to Accounts payable. (X)
 - Is an adjusting entry. (Correct)

Example

- Indicate all correct answers:
 - In the accounting cycle, closing entries are made before adjusting entries. (X)
 - Financial Statements may be prepare as soon as adjusted trial balance is completed. (Correct)
 - The owner's equity is not up to date until the closing entries have been posted. (Correct)
 - Adjusting entries are prepared before financial statements are prepared. (Correct)

Lesson-30

SUMMARY
(Previous Lectures)**Example**

- When a business is organized as a corporation:
 - Stock holders are liable for the debt of the business only in proportion to their percentage ownership in stock. (X)
 - Stock holders do not have to pay personal income tax on dividends received because the corporation is subject to income tax on its earnings. (X)
 - Fluctuations in the market value of outstanding shares of capital stock do not affect the amount of stock holders' equity shown in the balance sheet. (Correct)
 - Each stock holder has the right to bind the corporation to contracts and to make other managerial decisions. (X)

Example**Choose the correct answer.**

- Moosa Corporation was organized with authorization to issue 100,000 shares of Re. 1 par value common stock. 40,000 were issued to Moosa, the company's founder, but at a price of Rs. 5 per share. No other shares have yet been issued.
 - Moosa owns 40% of the stock holders' equity of the corporation. (X)
 - The corporation should recognize Rs. 160,000 gain in the issuance of these shares. (X)
 - If the balance sheet includes retained earnings of Rs. 50,000, total paid in capital amounts to Rs. 250,000. (X)
 - In the balance sheet, additional paid in capital account will have Rs. 160,000 balance, regardless of the profit earned or losses incurred since the organization was organized. (Correct)

Example**Choose the correct answer.**

- The statement of cash flows is designed to assist users in assessing each of the following except:
 - The ability of the company to remain solvent. (X)
 - In assessing the company's profitability. (Correct)
 - Major source of cash receipt during the period. (X)
 - The reason why net cash flows from operating activities differ from net income. (X)

Lesson-31**FINANCIAL STATEMENT ANALYSIS****Analysis of income statement and balance sheet:**

Financial Statements are like the Instrument panels of a business. There are different needs of different users of these statements. Users can be outside users and internal users. Identity of user is important, so as to provide him/her with relevant information.

Financial statement analysis is the process of examining relationships among financial statement elements and making comparisons with relevant information. It is a valuable tool used by investors and creditors, financial analysts, and others in their decision-making processes related to stocks, bonds, and other financial instruments. The goal in analyzing financial statements is to assess past performance and current financial position and to make predictions about the future performance of a company. Investors who buy stock are primarily interested in a company's profitability and their prospects for earning a return on their investment by receiving dividends and/or increasing the market value of their stock holdings. Creditors and investors who buy debt securities, such as bonds, are more interested in liquidity and solvency: the company's short-and long-run ability to pay its debts. Financial analysts, who frequently specialize in following certain industries, routinely assess the profitability, liquidity, and solvency of companies in order to make recommendations about the purchase or sale of securities, such as stocks and bonds.

Analysts can obtain useful information by comparing a company's most recent financial statements with its results in previous years and with the results of other companies in the same industry. Three primary types of financial statement analysis are commonly known as horizontal analysis, vertical analysis, and ratio analysis.

Three Broad Areas of Business:

- Solvency
- Stability
- Profitability

Fundamental Analysis

Fundamental analysis at company level involves analyzing basic financial variables in order to estimate intrinsic value. These variables include sales, profit margins, depreciation, the tax rate, sources of financing, asset utilization, and other factors. Additional analysis could involve the firm's competitive position in its industry, labor relations, technological changes, management, foreign competition, and so on. The end result of fundamental analysis at the company level is an estimate of the two factors that determine a security's value: cash flow stream and a required rate of return (alternatively, a P/E ratio)

Industry analysis

Industries as well as the market and companies, are analyzed through the study of a wide range of data, including sales, earnings, dividends, capital structure, product lines, regulations, innovations, and so on. Such analysis requires considerable expertise and is usually performed by industry analysts employed by brokerage firms and other institutional investors.

A useful first step is to analyze industries in terms of their stage in the life cycle. The idea is to assess the industry's general health and current position. A second step is to assess the position of the industry in relation to the business cycle and macro economic conditions. A third step involves qualitative analysis of industry characteristics designed to assist investors in assessing the industry's future prospects.

Uses and limitations of financial analysis

Ratio analysis is used by three main groups: (1) managers, who employ ratios to help analyze, control, and thus improve their firms' operations; (2) credit analyst, including bank loan officers and bond rating analysts, who analyze ratios to help ascertain a company's ability to pay its debts; and (3) stock analyst, who are interested in a company's efficiency, risk, and growth prospects.

- Many large firms operate different divisions in different industries, and for such companies it is difficult to develop a meaningful set of industry averages. Therefore, ratio analysis is more useful for small, narrowly focused firms than for large, multidivisional ones.
- Most firms want to be better than average, so merely attaining average performance is not necessarily good. As a target for high-level performance, it is best to focus on the industry leaders' ratios. Benchmarking helps in this regard.
- Inflation may have badly distorted firms' balance sheet- recorded values are often substantially different from "true" values. Further, because inflation affects both depreciation charges and inventory costs, profits are also affected. Thus, a ratio analysis for one firm over time, or a comparative analysis of firms of different ages, must be interpreted with judgment.
- Seasonal factors can also distort a ratio analysis. For example, the inventory turnover ratio for a food processor will be radically different if the balance sheet figure used for inventory is the one just before versus just after the close of the canning season. This problem can be minimized by using monthly averages for inventory (and receivables) when calculating turnover ratios.
- Firms can employ "window dressing" techniques to make their financial statements look stronger.
- Different accounting practices can distort comparisons. As noted earlier, inventory valuation and depreciation methods can affect financial statements and thus distort comparisons among firms. Also, if one firm leases a substantial amount of its productive equipment, its assets may appear low relative to sales because leased assets often do not appear on the balance sheet, at the same time, the liability associated with the lease obligation may not be shown as a debt. Therefore leasing can artificially improve both the turnover and the debt ratios. However accounting professional has taken steps to reduce this problem.
- It is difficult to generalize about whether a particular ratio is "good" or "bad". For example, a high current ratio may indicate a strong liquidity position, which is good or excessive cash, which is bad (because excess cash in the bank is a non-earning asset). Similarly, a high fixed assets turnover ratio may denote either that a firm uses its assets efficiently or that is undercapitalized and can not afford to buy enough assets.
- A firm may have some ratios that look "good" and others that look "bad," making it difficult to tell whether the company is, on balance, stronger or weak. However statistical procedures can be used to analyze the net effects of a set of ratios. Many banks and other lending organizations use discriminant analysis, a statistical technique, to analyze firms' financial ratios, and then classify the firms according to their probability of getting into financial trouble.

Accounting Information

▪ Different Accounting Policies

The choices of accounting policies may distort inter company comparisons. Example IAS 16 allows valuation of assets to be based on either revalued amount or at depreciated historical cost. The business

may opt not to revalue its asset because by doing so the depreciation charge is going to be high and will result in lower profit.

- **Creative accounting**

The businesses apply creative accounting in trying to show the better financial performance or position which can be misleading to the users of financial accounting. Like the IAS 16 mentioned above, requires that if an asset is revalued and there is a revaluation deficit, it has to be charged as an expense in income statement, but if it results in revaluation surplus the surplus should be credited to revaluation reserve. So in order to improve on its profitability level the company may select in its revaluation programme to revalue only those assets which will result in revaluation surplus leaving those with revaluation deficits still at depreciated historical cost.

Information problems

- **Ratios are not definitive measures**

Ratios need to be interpreted carefully. They can provide clues to the company's performance or financial situation. But on their own, they cannot show whether

Performance is good or bad.

Ratios require some quantitative information for an informed analysis to be made.

- **Outdated information in financial statement**

The figures in a set of accounts are likely to be at least several months out of date, and so might not give a proper indication of the company's current financial position.

- **Historical costs not suitable for decision making**

IASB Conceptual framework recommends businesses to use historical cost of accounting. Where historical cost convention is used, asset valuations in the balance sheet could be misleading. Ratios based on this information will not be very useful for decision making.

- **Financial statements contain summarized information**

Ratios are based on financial statements which are summaries of the accounting records. Through the summarization some important information may be left out which could have been of relevance to the users of accounts. The ratios are based on the summarized year end information which may not be a true reflection of the overall year's results.

- **Interpretation of the ratio**

It is difficult to generalize about whether a particular ratio is 'good' or 'bad'. For example a high current ratio may indicate a strong liquidity position, which is good or excessive cash which is bad. Similarly Non current assets turnover ratio may denote either a firm that uses its assets efficiently or one that is under capitalized and cannot afford to buy enough assets.

Comparison of performance over time

- **Price changes**

Inflation renders comparisons of results over time misleading as financial figures will not be within the same levels of purchasing power. Changes in results over time may show as if the enterprise has improved its performance and position when in fact after adjusting for inflationary changes it will show the different picture.

- **Technology changes**

When comparing performance over time, there is need to consider the changes in technology. The movement in performance should be in line with the changes in technology. For ratios to be more meaningful the enterprise should compare its results with another of the same level of technology as this will be a good basis measurement of efficiency.

- **Changes in Accounting policy**

Changes in accounting policy may affect the comparison of results between different accounting years as misleading. The problem with this situation is that the directors may be able to manipulate the results through the changes in accounting policy. This would be done to avoid the effects of an old accounting policy or gain the effects of a new one. It is likely to be done in a sensitive period, perhaps when the business's profits are low.

- **Changes in Accounting standard**

Accounting standards offers standard ways of recognizing, measuring and presenting financial transactions. Any change in standards will affect the reporting of an enterprise and its comparison of results over a number of years.

- **Impact of seasons on trading**

As stated above, the financial statements are based on year end results which may not be true reflection of results year round. Businesses which are affected by seasons can choose the best time to produce financial statements so as to show better results. For example, a tobacco growing company will be able to show good results if accounts are produced in the selling season. This time the business will have good inventory levels, receivables and bank balances will be at its highest. While as in planting seasons the company will have a lot of liabilities through the purchase of farm inputs, low cash balances and even nil receivables.

Inter-firm comparison

- **Different financial and business risk profile**

No two companies are the same, even when they are competitors in the same industry or market. Using ratios to compare one company with another could provide misleading information. Businesses may be within the same industry but having different financial and business risk. One company may be able to obtain bank loans at reduced rates and may show high gearing levels while as another may not be successful in obtaining cheap rates and it may show that it is operating at low gearing level. To an informed analyst he may feel like company two is better when in fact its low gearing level is because it can not be able to secure further funding.

▪ Different capital structures and size

Companies may have different capital structures and to make comparison of performance when one is all equity financed and another is a geared company it may not be a good analysis.

▪ Impact of Government influence

Selective application of government incentives to various companies may also distort intercompany comparison. One company may be given a tax holiday while the other within the same line of business not, comparing the performance of these two enterprises may be misleading.

▪ Window dressing

These are techniques applied by an entity in order to show a strong financial position. For example, ABC Trucking can borrow on a two year basis, K10 Million on 28th December 2006, holding the proceeds as cash, then pay off the loan ahead of time on 3rd January 2007. This can improve the current and quick ratios and make the 2006 balance sheet look good. However the improvement was strictly window dressing as a week later the balance sheet is at its old position.

Ratio analysis is useful, but analysts should be aware of these problems and make adjustments as necessary. Ratios analysis conducted in a mechanical, unthinking manner is dangerous, but if used intelligently and with good judgment, it can provide useful insights into the firm's operations.

Three broad areas of evaluating a business are its solvency, stability and profitability, which are studied through analysis of financial statements. There are four techniques of Financial Statements Analysis.

ANALYSIS TECHNIQUES

1. **Rupee and percentage changes:** figures of Financial Statements from one year to the next i.e. year-to-year are considered.

Income Statement for the year ending June, 30

	2001	2002	2003
Net sales	400	500	600
Cost of Good Sold.	235	300	370
Gross profit	165	200	230
Other expenses	115	160	194
Net income	50	40	36

Percentage change cannot be computed for negative amount or zero amounts in base year. Mere figure of rising sales are not sufficient. We have to look at the volume of sales vis-à-vis sale price. Quarterly or monthly measurement is also done. It compares results of current quarter or month with those of the same quarter or month in the previous year in order to take care of distortion by seasonal fluctuations. Size of base amount has to be reasonable (Example: 90% decline to be followed by 900% increase just to get back to the starting point). Percentage become misleading when base is small:

	1st year	2nd year	3rd year
Income	100,000	10,000 (90% decline)	100,000 (900% increase)

Lesson-32

COMMON –SIZE AND INDEX ANALYSIS

Method used by interested parties such as investors, creditors, and management to evaluate the past, current, and projected conditions and performance of the firm. Ratio analysis is the most common form of financial analysis. It provides relative measures of the firm's conditions and performance. Horizontal Analysis and Vertical Analysis are also popular forms. Horizontal analysis is used to evaluate the trend in the accounts over the years, while vertical analysis, also called a Common Size Financial Statement discloses the internal structure of the firm. It indicates the existing relationship between sales and each income statement account. It shows the mix of assets that produce income and the mix of the sources of capital, whether by current or long-term debt or by equity funding. When using the financial ratios, a financial analyst makes two types of comparisons:

(a) Industry comparison. The ratios of a firm are compared with those of similar firms or with industry averages or norms to determine how the company is faring relative to its competitors. Industry average ratios are available from a number of sources

(b) Trend analysis. A firm's present ratio is compared with its past and expected future ratios to determine whether the company's financial condition is improving or deteriorating over time.

After completing the financial statement analysis, the firm's financial analyst will consult with management to discuss plans and prospects, any problem areas identified in the analysis, and possible solutions. Given below is a list of widely used financial ratios.

2. Trend percentages/ Horizontal Analysis/ Index Analysis: This analysis considers changes in items of financial statement from a base year to the following years to show the direction of change. This is also called horizontal analysis. In this, the figures of various years are placed side by side in adjacent columns in the form of comparative financial statements.

3. Component percentages/ Vertical Analysis/ Common- Size Analysis: This type of analysis Indicates the relative size of each item in the Financial Statements as a percentage of the total of that Statement i.e. Total Assets or total Liabilities & Shareholders equity in Balance Sheet and Sales in Income Statement. Such a statement is then called common-size Financial Statement. This type of analysis technique is also called Vertical Analysis.

Vertical Analysis

When using vertical analysis, the analyst calculates each item on a single financial statement as a percentage of a total. The term *vertical analysis* applies because each year's figures are listed vertically on a financial statement. The total used by the analyst on the income statement is net sales revenue, while on the balance sheet it is total assets. This approach to financial statement analysis, also known as *component percentages*, produces *common-size financial statements*. Common-size balance sheets and income statements can be more easily compared, whether across the years for a single company or across different companies

Financial statement item that is used as a base value. All other accounts on the financial statement are compared to it. In the balance sheet, for example, total assets equals 100%. Each asset is stated as a percentage of total assets. Similarly, total liabilities and stockholders' equity are assigned 100% with a given liability or equity account stated as a percentage of the total liabilities and stockholders' equity. For the income statement, 100% is assigned to net sales with all revenue and expense accounts related to it.

Under vertical analysis, the statements showing the percentages are referred to as Common Size Financial Statements. Common size percentages can be compared from one period to another to identify areas needing attention. An illustration follows:

Net Sales	\$300,000	100%
Less: Cost of Sales	<u>60,000</u>	<u>20%</u>
Gross Profit	\$240,000	80%
Less: Operating Expenses	<u>150,000</u>	<u>50%</u>
Net Income	<u>\$ 90,000</u>	<u>30%</u>

Horizontal Analysis

When an analyst compares financial information for two or more years for a single company, the process is referred to

as *horizontal analysis*, since the analyst is reading across the page to compare any single line item, such as sales revenues. In addition to comparing dollar amounts, the analyst computes percentage changes from year to year for all financial statement balances, such as cash and inventory. Alternatively, in comparing financial statements for a number of years, the analyst may prefer to use a variation of horizontal analysis called *trend analysis*. Trend analysis involves calculating each year's financial statement balances as percentages of the first year, also known as the base year. When expressed as percentages, the base year figures are always 100 percent, and percentage changes from the base year can be determined.

Time series analysis of financial statements covering more than one accounting period; also called Trend Analysis. It looks at the percentage change in an account over time. The percentage change equals the change over the prior year. For example, if sales in 20X0 are \$100,000 and in 20X1 are \$300,000, there is a 200% increase ($\$200,000/\$100,000$). By examining the magnitude of direction of a financial statement item over time, the analyst can evaluate its reasonableness.

Common Size Financial Statement

A company financial statement that displays all items as percentages of a common base figure. This type of financial statement allows for easy analysis between companies or between time periods of a company.

Lesson-33

RATIOS ANALYSIS

4. ANALYSIS BY RATIOS:

Financial Ratios are like financial temperatures, which give the state of the health of a business. This analysis technique is most widely used. In these inter-linkages of Income Statement and Balance Sheet items are established and inferences are drawn there from.

The analysis technique by Ratios would broadly consist of the following:-

- a) **Analysis by short-term creditors:** Interest of short-term creditors is to watch the ability of business to meet its debts as these become due; i.e. Short-term solvency. They want to see whether business has the ability to meet its current liabilities out of its current assets. If the entity can not maintain a short-term debt paying ability, it will not be able to maintain a long-term debt-paying ability, nor will it be able to satisfy its stockholders. Even a very profitable entity will find itself bankrupt if it fails to meet its obligations to short-term creditors. The ability to pay current obligations when due is also related to the cash-generating ability of the firm. While analyzing the short-term debt-paying ability of the firm, we find a close relationship between the current assets and the current liabilities. Generally the current liabilities will be paid with cash generated from the current assets. Profitability of the firm does not determine the short-term debt paying ability. Indicators of this ability are the short-term solvency ratios, which are:-

5. Liquidity Ratios

Liquidity Ratios are used to measure a firm's ability to meet short-term obligations. They compare short-term obligations to short-term (or current) resources available to meet these obligations. From these ratios, much insight can be obtained into the present cash solvency of the firm and the firm's ability to remain solvent in the event of adversity.

- i) **Current ratio** = $\frac{\text{Current assets}}{\text{Current liabilities}}$ (Normal ratio for this is 2:1)

Current assets divided by current liabilities. It shows a firm's ability to cover its current liabilities with its current assets. Higher the current Ratio, the greater the ability of the firm to pay its bills; however, the ratio must be regarded as a crude measure because it does not take into account the liquidity of the individual components of the current assets composed principally of cash and non-overdue receivables is generally regarded as more liquid than a firm whose current assets consist primarily of inventories. Consequently, we turn to a more critical, or sever, test of the firm's liquidity-the acid test ratio i.e. Current assets should be twice the current liabilities. It should however be noted that too high ratio may indicate that capital is not being used productively and efficiently. Such a situation calls for financial reorganization.

- ii) **Quick ratio.** This is also called **acid-test ratio**. In this, inventories and pre-paid expenses are excluded from current assets. Only cash, marketable securities and Receivables (called Quick Assets) are considered. For Quick Ratio, the normal ratio is 1:1 i.e. quick assets should be equal to current liabilities. It should be noted that current ratio measures "general liquidity", whereas quick ratio measures "immediate liquidity".

iii) **Acid Test Ratio** = $\text{Current assets} - \text{Inventories} / \text{Current Liabilities}$

This ratio serves as a supplement to the current ratio in analyzing liquidity. This ratio is the same as the current ratio except that it excludes inventories. Presumably the least liquid portion of current-assets-from the numerator. The ratio concentrates primarily on the more liquid current assets, cash, marketable securities, and receivables, in relation to current obligations. Thus, this ratio provides a more penetrating measure of liquidity than does the current ratio.

iv) **Cash Ratio** = $\text{Cash Equivalents} + \text{Marketable Securities} / \text{Current Liabilities}$

The cash ratio indicates the immediate liquidity of the firm. A high cash ratio indicates that the firm is not using its cash to its best advantages; cash should be put to work in the operations of the company

Lesson-34

ACTIVITY RATIOS

Activity Ratios also known as efficiency or turn over ratios, measure how effectively the firm is using its assets. Some aspects of activity analysis are closely related to liquidity analysis. Our focus is to attention on how effectively the firm is managing two specific asset groups-receivables and inventories- and its total assets in general.

iii) **Working capital:** It depends upon the size and nature of business. Arithmetically it is the difference of Current Assets and Current Liabilities. Two companies with same working capital can have different current ratios. Similarly two companies may have same current ratio but different working capital.

iv) **Quality of Working Capital:**

(A) Liquidity of inventory:

To help determined how effectively the firm is managing inventory (and also to gain an indication of the liquidity of inventory) we compute the **inventory turn over ratio**. This ratio, like other ratios, must be judged in relation to ratios of similar firms, the industry average or both.

Generally the higher the inventory turn-over, the more efficient the inventory management of the firm and the “fresher” more liquid, the inventory and vice versa.

It shows how quickly inventory is sold and is determined by **Inventory Turnover Ratio (ITO)**. It is the number of times the company sells (turns over) it inventory during the year.

$$\text{Inventory Turnover Ratio (ITO)} = \frac{\text{Cost of good sold for the year}}{\text{Average inventory during the year}} = \frac{60}{20} = 3$$

The higher the rate, the more quickly the company sells its inventory. However, companies selling high markup items e.g. Jewelry Stores, F-16 can operate successfully with much lower ITO.

Days required to sell inventory: i.e.

$$\text{Converting inventory into Receivables} = \frac{365}{\text{ITO}} \text{ or } \frac{300}{3} = \frac{365}{3} \text{ or } \frac{300}{3} = 122 \text{ or } 100$$

Lesson-35

ACTIVITY RATIOS

(Continued)

- (B) **Liquidity of Receivables:** It shows how quickly Accounts Receivables are collected i.e. converted into cash. It is determined by Receivable Turnover Ratio (RTO). It is number of times "Receivables" are converted into cash during the year.

$$= \frac{\text{net sale for the year}}{\text{Average Receivables during the year.}} = 100 = 10$$

$$\text{Ideally RTO} = \frac{\text{net credit sales}}{\text{Monthly average of Receivables}}$$

The higher the RTO, the more liquid the company's Receivables.

Days required to collect Receivables i.e.

$$\text{Converting "Receivable" into cash} = 365 \text{ or } 300 = 36 \text{ or } 30$$

Normal credit terms: 30 to 60 days.

Length of operating cycle: A+ B (158, 130) days.

RATIOS

Gross profit ratio	$\frac{\text{Gross Profit}}{\text{Net sales}} \times 100$
Net Profit ratio	$\frac{\text{Net Profit}}{\text{Net sales}} \times 100$
Operating Profit ratio	$\frac{\text{Operating Profit}}{\text{Net sales}} \times 100$
Expenses ratios	$\frac{\text{Individual Expenses}}{\text{Net sales}} \times 100$
Operating (Cost) Ratio	$\frac{\text{Operating cost}}{\text{Net sales}} \times 100$
Net Profit to net worth ratio	$\frac{\text{Net Profit after interest and tax}}{\text{Net sales}} \times 100$
Return on capital employed (ROI)	$\frac{\text{Net Profit before interest, tax}}{\text{Capital employed}} \times 100$

Earning per share	$\frac{\text{Net profit available for equity shareholders}}{\text{Number of equity shares}}$
Dividends per share	$\frac{\text{Dividend amount}}{\text{Number of equity shares}}$
Capital employed turnover ratio	$\frac{\text{Cost of sales}}{\text{Capital employed}}$
Fixed assets turnover ratio	$\frac{\text{Cost of sales or sales}}{\text{Fixed assets}}$
Working capital turnover ratio	$\frac{\text{Cost of sales or Net sales}}{\text{Net working capital}}$
Inventory turnover ration	$\frac{\text{Cost of goods and sold}}{\text{Average accounts receivables}}$
Debtors (receivables) turnover ratio	$\frac{\text{Annual net credit sales}}{\text{Average accounts receivables}}$
Debtors (receivables) collection period	$\frac{\text{Accounts receivables}}{\text{Average accounts receivables}}$
Creditors turnover ratio	$\frac{\text{Net credit purchases}}{\text{Average creditors}}$
Average credit period	$\frac{\text{Average accounts payables}}{\text{Net credit purchase per day}}$
Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$
Quick ratio/Acid test ratio	$\frac{\text{Quick assets}}{\text{Current liabilities}}$
Debt-equity ratio:	
(i) Debt to net worth	$\frac{\text{Total long term debt}}{\text{Shareholder's funds}}$
(ii) External-internal equity	$\frac{\text{External equity}}{\text{Internal equity}}$
(iii) Debt vs. funds	$\frac{\text{Total long term debts}}{\text{Total long term funds}}$
❖ Debt service ratio	$\frac{\text{Earnings before interest and taxes}}{\text{Fixed interest charges}}$
❖ Fixed assets ratio	$\frac{\text{Net fixed assets}}{\text{Net fixed assets}}$

	Long-term funds
❖ Solvency (Debt to total funds) ratio	$\frac{\text{Total liabilities} - \text{Total assets}}{\text{Total assets}}$
❖ Capital gearing ratio	$\frac{\text{Equity}}{\text{fixed interest bearing securities}}$
❖ Proprietary ratio	$\frac{\text{Proprietor's funds}}{\text{Total assets}}$

Lesson-36

LEVERAGE/DEBT RATIOS

- (b) **Analysis by long-term creditors:** Interest of long-term creditors is to see the long-term solvency of the business and rate of return on their loans. Solvency is the ability to meet outside liabilities from total assets. Indicators of solvency are the **Long-term Solvency**, which are as follows:-
- i) **Debt –To-Total-Assets:** The debt-to-total assets ratio is derived by dividing a firm's total debt by its total assets: It indicates percentage of total assets financed by debt

$$\frac{\text{Total outside liabilities /Debt}}{\text{Total assets (total liabilities +shareholders funds)}} = \frac{75}{200} = 37.5\%$$

From creditors' point of view, the lower the debt ratio, the better it is because it means that shareholders have contributed the bulk of funds and margin of protection to creditors is high.

In addition to the previous ratio, we may wish to compute the following ratio, which deals with only the long-term capitalization of the firm:

***Long Term debt/ Total Capitalization** (Share capital + Fixed Liabilities)

Where total capitalization represents all long-term debt and shareholder's equity. This tells us the relative importance of long term debt to the capital structure (long-term financing) of the firm.

Leverage: It means operating a business with borrowed money. It should be used to earn a return (on assets or equity) greater than cost of borrowing i.e. interest. Alternate term for this is "**Gearing**".

- ii) **Equity ratio:** Total stockholders equity (including preferred stock) = 125 = 62.5%

$$\frac{\text{Total assets (total liabilities + shareholders funds)}}{200}$$

This is opposite of Debt ratio. Low equity ratio indicates extensive use of leverage i.e. borrowings.

iii) **Debt-To- Equity:** Ratio of borrowed capital to Shareholders' funds is called Debt – Equity Ratio. The debt-to-equity ratio is computed by simply dividing the total debt of the firm (including current liabilities) by its shareholders' equity:

$$= \frac{75}{125} = 0.6 \text{ i.e. Debt is 0.6 of Equity} = \frac{\text{Debt}}{\text{Equity Ratio}} = \frac{37.5}{62.5} \text{ (Debt equity Ratio)}$$

Creditors would generally like this ratio to be low. The lower the ratio, the higher the level of firm's that is being provided by shareholders and the larger the creditor cushion (margin of protection) in the event of shrinking asset values or outright losses.

Depending on the purpose for which the ratio is used, preferred stock is sometimes included as debt rather than as equity when debt ratios are calculated. Preferred stock represents a prior claim from the stand point of the investors in common stock: consequently, investors might include preferred stock as debt when analyzing a firm. The ratio of debt to equity will vary according to the nature of the

business and the variability of cash flows. A comparison of the debt to equity ratio for a given company with those of similar firms gives us a general indication of the credit worthiness and financial risk of the firm.

Coverage Ratio

Coverage ratios are designed to relate the financial charges of a firm to its ability to service, or cover, them. One of the most traditional coverage ratios is the interest coverage ratio, or times interest earned

iv) **Interest coverage ratio** = $\frac{\text{operating income available for interest payment}}{\text{annual interest expenses}} = \frac{25}{5} = 5$

(Normal ratio 3:5)

This ratio serves as one measure of the firm's ability to meet its interest payments and thus avoid bankruptcy. In general, the higher the ratio, the greater the likelihood that the company could cover its interest payments without difficulty. It also sheds some light on the firm's capacity to take on new debt.

Changes in Solvency Ratios indicate changes in enterprise activities; its expansion or contraction.

Lesson-37

PROFITABILITY RATIOS**(C) Analysis by common stockholders:**

Common Stockholders are the investors whose objective is to determine whether investment is sound, how the business performed and what has are future expectations. Their interest is to watch Return on their investment (ROI).

i) Return on Common Stockholder's equity =

$$\frac{\text{Net income applicable to common stock} \times 100}{\text{Common stockholder's equity}} = \frac{20 \times 100}{125} = 16\% \text{ or } 10.4\%$$

It is another summary measure of overall firm performance is return on equity. Return on equity (ROE) compares net profit after taxes (minus preferred stock dividends, if any) to the equity that shareholders have invested in the firm.

The ratio tells us the earning power on shareholders ' book value investment and is frequently used in comparing two or more firms in an industry. A high return on equity often reflects the firm's acceptance of strong investment opportunities and effective expensive management. However, if the firm has chosen to employ a level of debt that is high by industry standards, a high ROE might simply be the result of assuming excessive financial risk.

With all of the profitability ratios discussed, comparing one company to similar companies and industry standards is extremely valuable. Only by comparisons are we able to judge whether the profitability of a particular company is good or bad, and why? Absolute figures provide some insight, but it is relative performance that is most revealing.

If there are two types of Shareholders, the net income applicable to common stock = net income – preferred dividend requirement; and common Stockholders' equity = total stockholders' equity – preferred stock equity at issue price – dividend arrears, if any.

The shareholders would like to see if this rate is higher than rate of interest paid to long-term creditors or rate of dividend paid to preferred stockholders? If return on equity falls below the rate of interest, it is unfavorable from the viewpoint of common stockholders.

ii) Earning per share of common stock = $\frac{\text{Net income applicable to common shareholders}}{\text{Number of common shares outstanding}}$

$$= \frac{20}{1.25 \text{ (each share of Rs.100)}} = \text{Rs.16 or } 13 = \frac{\text{Rs.10.4 (excluding other income)}}{1.25}$$

Decline in EPS is generally followed by decline in market value of common shares though not necessarily to the same extent or percentage. EPS is applied to common stock. Preferred shares have fixed dividends.

Before we move on, you should note that there are three types of EPS numbers:

Trailing EPS – last year's numbers and the only actual EPS

Current EPS – this year's numbers, which are still projections

Forward EPS – future numbers, which are obviously projections

$$\text{iv) Price-earning ratio (P/E)} = \frac{\text{Market price/share}}{\text{Earning/share}}$$

Companies with record of rapid growth have P/E ratio of 20 to 1 or even higher.

What does P/E tell you? The P/E gives you an idea of what the market is willing to pay for the company's earnings. The higher the P/E the more the market is willing to pay for the company's earnings. Some investors read a high P/E as an overpriced stock and that may be the case, however it can also indicate the market has high hopes for this stock's future and has bid up the price.

Conversely, a low P/E may indicate a "vote of no confidence" by the market or it could mean this is a sleeper that the market has overlooked. Known as value stocks, many investors made their fortunes spotting these "diamonds in the rough" before the rest of the market discovered their true worth.

What is the "right" P/E? There is no correct answer to this question, because part of the answer depends on your willingness to pay for earnings. The more you are willing to pay, which means you believe the company has good long term prospects over and above its current position, the higher the "right" P/E is for that particular stock in your decision-making process. Another investor may not see the same value and think your "right" P/E is all wrong.

iv) Dividend Yield

Some stockholders invest primarily to receive regular cash income in the form of dividends. Others do so to secure capital gains through rising market price of common stock.

$$\text{Dividend yield} = \frac{\text{Dividend per share} \times 100}{\text{Market price per share}} \%$$

Dividend Yield is anticipated annual dividend divided by the market price of the stock.

Date	Market price per share	EPS	P/E	Dividend ratio	Dividend per share	Dividend yield
----	-----	-----	-----	-----	-----	-----
31.12.93	160		20.25	8	5	3.1
31.12.94	132		13.2	10	4.8	3.6

The dividend yield on a company stock is the company's annual dividend payments divided by its market cap, or the dividend per share divided by the price per share. It's often expressed as a percentage.

Preferred share dividend yield

Since payment of the dividend is stipulated by the prospectus, owners of preferred shares calculate multiple yields to reflect the different possible outcomes over the life of the security. Be aware that these yields will be different from the company's point of view. The company will continue to call their security (e.g.) a 6%--- when the stated dividend is 6% of the issue price of the share.

- Current yield is the \$Dividend / Pfd share current price.

- Since the share may be purchased at a lower (higher) cost than its final redemption value, holding it to maturity will result in a capital gain (loss). The annualized rate of gain is calculated using the Present value of a dollar calculation. ('PV' is the current stock price. 'FV' is the redemption value. 'n' is the number of years to redemption. Solve for the interest rate 'r'.) The yield to maturity is the sum of this annualized gain (loss) and the current yield.

Common share dividend yield

Unlike preferred stock, there is no stipulated dividend for common stock. Instead, dividends paid to holders of common stock are set by management, usually in relation to the company's earnings. There is no guarantee that future dividends will match past dividends or even be paid at all. Due to the difficulty in accurately forecasting future dividends, the most commonly-cited figure for dividend yield is the current yield which is calculated using the following formula:

$$\text{Current dividend yield} = \frac{\text{most recent full -year dividend}}{\text{Current share price}}$$

For example, take a company which paid dividends totaling \$1 last year and whose shares currently sell for \$20. Its dividend yield would be calculated as follows

$$\begin{aligned} &= \$1/\$20 \\ &= 0.05 \\ &= 5\% \end{aligned}$$

Rather than use last year's dividend, some try to estimate what the next year's dividend will be and use this as the basis of a future dividend yield. It should be noted that estimates of future dividend yields are by definition uncertain

Dividend Pay out Ratio:

Annual cash dividends divided by annual earnings: or alternatively, dividends per share divided by earning per share. The ratio indicates the percentage of a company's earnings that is paid out to shareholders in cash.

Understanding Dividend Payout Ratio

The Dividend Payout Ratio (DPR) is one of those numbers. It almost seems like a measurement invented because it looked like it was important, but nobody can really agree on why.

The DPR (it usually doesn't even warrant a capitalized abbreviation) measures what a company's pays out to investors in the form of dividends.

You calculate the DPR by dividing the annual dividends per share by the Earnings Per Share.

$$\text{DPR} = \text{Dividends per Share} / \text{EPS}$$

For example, if a company paid out \$1 per share in annual dividends and had \$3 in EPS, the DPR would be 33%. ($\$1 / \$3 = 33\%$)

The real question is whether 33% is good or bad and that is subject to interpretation.

Growing companies will typically retain more profits to fund growth and pay lower or no dividends. Companies that pay higher dividends may be in mature industries where there is little room for growth and paying higher dividends is the best use of profits (utilities used to fall into this group, although in recent years many of them have been diversifying).

Either way, you must view the whole DPR issue in the context of the company and its industry. By itself, it tells you very little.

Lesson-38

PROFITABILITY RATIOS (Continued)

d) Analysis by Preferred Stockholders

If convertible, interest of preferred stockholders is similar to those of common one. If not, then their interest is similar to that of long-term creditors.

$$\text{Dividend Coverage Ratio} = \frac{\text{Net income}}{\text{Amount of annual preferred dividend}}$$

Normal Ratio: 5 to 10

Note: Ratios should be used with other elements of financial analysis. Most important is to use common sense and judgments. Also study the industrial sector in which the company operates and relate "Industry Sector" climate to current and projected economic developments.

Analysis by management:

The main concern of management is to watch the interest of all those who have provided capital to the business. For this, it has to ensure efficient use of capital and resources employed. To watch the interests and needs of customers and clients, the management has to take care of profitability, solvency and long-term stability of the business. It would see as to which operating areas have contributed to success and which have not? It would also determine strengths and weaknesses and reasons thereof. It would also take appropriate measures for improvement and correction.

Indicators of profitability:

Difference between **Profit** and **Profitability**. Profit is an absolute figure whereas profitability is ratio of profit to some other item like sales.

$$(i) \text{ Return on total assets} = \frac{\text{Operating income} \times 100}{\text{Average assets}} = \frac{25 \times 100}{200} = 12.5 \%$$

Operating income is used, since interest and income taxes are factors beyond control of management. Also since operating income is earned throughout the year, we relate it to average investment in assets.

Return on Total Assets (ROTA). A measure of how effectively a company uses its assets. Calculated by (income before interest and tax) / (fixed assets + current assets).

Importance of Return on Total Assets:

Smart companies strictly control major purchases, attempting to limit those that will best bring a return in greater revenue to the company. The Return on Total Assets is a useful way to measure how well the company is actually able to make intelligent choices on how to spend its money on new assets.

$$(ii) \text{ Return on Investment} = \frac{\text{Operating income}}{(\text{Total Assets}) \text{ Stockholders equity} + \text{fixed liabilities} (1)} = \frac{25 \times 100}{175} = 14.3\%$$

Measures overall effectiveness in generating profits with available assets; earning power of invested capital

Return on Investment (ROI) analysis is one of several approaches to building a financial business case. The term means that decision makers evaluate the investment by comparing the magnitude and timing of expected gains to the investment costs.

Decision makers will also look for ways to improve ROI by reducing costs, increasing gains, or accelerating gains.

In the last few decades, this approach has been applied to asset purchase decisions (computer systems or a fleet of vehicles, for example), "go/no-go" decisions for programs of all kinds (including marketing programs, recruiting programs, and training programs), and to more traditional investment decisions

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The Simple Return on Investment

Return on investment is frequently derived as the "return" (incremental gain) from an action divided by the cost of that action. That is "simple ROI". For example, what is the ROI for a new marketing program that is expected to cost \$500,000 over the next five years and deliver an additional \$700,000 in increased profits during the same time?

$$\text{Simple ROI} = \frac{\text{Gains} - \text{Investments costs}}{\text{Investments Costs}}$$

Simple ROI works well in situations where both the gains and the costs of an investment are easily known and where they clearly result from the action. Other things being equal, the investment with the higher ROI is the better investment. The return on investment metric itself, however, says nothing about the magnitude of returns or risks in the investment.

In complex business settings, however, it is not always easy to match specific returns (such as increased profits) with the specific costs that bring them, and this makes ROI less trustworthy as a guide for decision support. Simple ROI also becomes less trustworthy as a useful metric when the cost figures include allocated or indirect costs, which are probably not caused directly by the action or the investment.

Business investments typically involve financial consequences extending several years or more. In such cases, the metric has meaning only when the time period is clearly stated. Shorter or longer time periods may produce quite different ROI figures for the same investment. When financial impacts extend across

several years, moreover, the analyst must decide whether to use discounted (net present value) figures or non discounted values.

Return on Sales Ratio

What it is?

This ratio compares after tax profit to sales. It can help you determine if you are making enough of a return on your sales effort.

When to use it?

If your company is experiencing a cash flow crunch, it could be because its mark-up is not enough to cover expenses. Return on sales can help point this out, and allow you to adjust prices for an adequate profit. Also, be sure to look for trends in this figure. If it appears to be dropping over time, it could be a signal that you will soon be experiencing financial problems.

$$\text{iii) Return on Sales} = \frac{\text{Net income}}{\text{Net sales}} \times 100 = 20\% \text{ or } 13\%$$

A ratio widely used to evaluate a company's operational efficiency. ROS is also known as a firm's "operating profit margin".

This measure is helpful to management, providing insight into how much profit is being produced per dollar of sales. As with many ratios, it is best to compare a company's ROS over time to look for trends, and compare it to other companies in the industry. An increasing ROS indicates the company is growing more efficient, while a decreasing ROS could signal looming financial troubles.

iv) Assets turn over ratio:

$$\text{It shows relative effectiveness of assets utilization} = \frac{\text{Net Sales}}{\text{Average assets}} = 50\%$$

Measures relative Efficiency of total assets to generate sales.

Asset turnover measures how effectively a business is using assets to generate sales. It is:

$$\text{Sales} \div \text{assets}$$

There are a few variations on this, depending on what measure of assets is used. The most obvious is total assets, i.e., fixed assets + current assets. This measures how many pounds in sales is generated for each pound invested in assets.

From an investor's point of view, it can be argued that current liabilities should be deducted from the amount of assets used. Investors are concerned with returns on their investment; therefore the funding of current assets from current liabilities can be ignored.

Note: Current liabilities are excluded while calculating Return on Investment, since these are not "investments". As such ROI is a measure of management's skill in exploiting moneys invested in the business. Hence "Operating Income" is taken i.e. Income before non-operating expenses and taxes.

Lesson-39

OPERATING CYCLE

Efficiency of operating cycle/process: It is determined by activity ratios, keeping in view the conversion process, which is as follows:-

Cash/assets ---- → Inventory -----→ Receivables ---- → Cash
 Processing Sales, collection

Operating Cycle=Inventory sale days (average) +Receivable Collection days (average).

The shorter the operating cycle, the higher the quality of current assets and the greater the efficiency of management.

Managing Accounts Receivable: The business offers cash discount (2/10, n/30) to encourage early payment or “factors” Receivables i.e. selling Receivables to a financial institution (factor).

Cash Cycle

The length of time from the actual outlay of cash for purchases until the collection of receivables resulting from the sale of goods or services

Current assets (1) are in the form of cash, (2) will be realized in cash, or (3) conserve the use of cash with in the operating cycle of a business or one year, whichever is longer.

The five categories of assets usually found in current assets, listed in their order of liquidity, include cash, marketable securities, receivables, inventories, and prepayments.

The operating cycle for a company is the time period between the acquisition of goods and the final cash realization resulting from sales and subsequent collections. For example, a food store purchases inventory and then sells the inventory for cash. The relatively short time that the inventory remains an asset of the food store represents a very short operating cycle. In another example, a car manufacturer purchases materials and then uses Labour and overhead to convert these materials into a finished car. A dealer buys the car on credit and then pays the manufacturer. Compared to the food store, the car manufacturer has a much longer operating cycle, but it is still less than a year. Only a few businesses have an operating cycle longer than a year.

Cash is a medium of exchange that a bank will accept for deposit and a creditor will accept for payment. To be classified as a current asset, cash must be free from any restrictions that would prevent its deposit or use to pay creditors classified as current. If restricted for specific-short term creditors, many firms still classify this cash under current assets, but they disclose the restrictions. Cash restricted for short-term creditors should be eliminated along with the related amount of short-term debt when determining the short term debt-paying ability. Cash should be available to pay general short-term creditors to be considered as part of the firm’s short-term debt-paying ability.

Marketable securities

The business entity has varying cash needs throughout the year. Because an inferred cost arises from keeping money available, management does not want to keep all of the entity’s cash need s in the form of

cash through the year. The available alternative turns some of the cash into productive use through short-term investments (**marketable securities**) which can be converted into cash as the need arises.

To qualify as a marketable security, the investment must be readily marketable, and it must be the intent of management to convert the investment to cash within the operating cycle or one year, whichever is longer. The key element of this test is managerial intent.

It is to management advantage to show investments under marketable securities, instead of long-term investments, because this classification improves the liquidity appearance of the firm. When the same securities are carried as marketable securities year after year, they are likely held for a business purpose. For example, the other company may be a major supplier or customer of the firm being analyzed. The firm would not want to sell these securities to pay short-term creditors. Therefore, to be conservative, it is better to reclassify them as investments for analysis purposes.

Investments classified as marketable securities should be temporary. Examples of market able securities include treasury bills, short-term notes of corporations, government bonds, corporate bonds, preferred stock, and common stock. Investments in preferred stock and common stock are referred to as marketable equity securities.

Receivables

An entity usually has a number of claims to future inflows of cash. These claims are usually classified as accounts receivable and notes receivable on the financial statements. the primary claim that that most entities have comes from the selling of merchandise or services on account to customers, referred to as trade receivables, with the customer promising to pay within a limited period of time, such as 30 days.

The common characteristic of receivables is that the company expects to receive cash some time in the future. This causes two valuation problems. First, a period of time must pass before the receivable can be collected, so the entity incurs costs for the use of these funds. Second collection may not be made.

Inventories

Inventor is often the most significant asset in determining the short-term debt paying ability of an entity. Often the inventory account is more than half of the total current assets. Because of the significance of inventories, a special effort should be made to analyze properly this important area.

To be classified as inventory, the asset should be for sale in the ordinary course of business, or used or consumed in the production of goods. A trading concern purchases merchandise in a form to sell to customers. Inventories of a trading concern, whether wholesale or retail, usually appear in one inventory account (merchandise inventory). A manufacturing concern produces goods to be sold. Inventories of a manufacturing concern are normally classified in three distinct inventory accounts, inventory available to use in production (raw materials), Inventory in production (work in process), and inventory completed (Finished goods)

Determining Valuation and liquidity is a fairly complicated problem when analyzing inventories. The basic approach to the valuation of inventory uses cost. The cost figure is often difficult to determine, especially when dealing with manufacturing inventory. because of the concept of conservatism, the cost figure may not be acceptable if it can not be recovered. Therefore if the market figure is below cost the inventory is reduced to market. Inventory is stated at lower of cost or market on the financial statements

Example No.1

Balance sheet of a business

Assets		Liabilities & stockholders' equity.	
Current Assets.		Current liabilities	
(37%)	31,629,714	15,387,428	(18%)
(Includes subscription receivable Rs.7, 200,000		long-term liabilities	(12%)
		10,258,286	
Fixed Assets		Stockholders' equity	
		59,840,000	(70%)
(63%)	53,856,000		
Total:	85,485,714	Total	85,485,714
	=====		=====

Lesson-40

STOCKHOLDERS' EQUITY SECTION OF THE BALANCE SHEET**Stockholders' equity**

Rs.6 preferred stock, Rs.100 par value, callable at 102,	Rs.102, 200,000
Shared authorized	Rs. 12, 000,000

Common stock Rs.5 par value, 5,000,000 shares authorized:	
Issued	Rs.10, 000,000
Subscribed	Rs. 4,000,000
	Rs. 14,000,000

Additional paid-in-capital:

Preferred	Rs.360, 000	
Common (including subscribed shares)	30,800,000	
		Rs. 31,160,000
Retained earnings		Rs. 2,680,000
Total stockholders' equity		Rs.59, 840,000

I) No of preferred shares issued

$$= \text{Rs.12, 000,000}(\text{total par value}) = 120,000 \text{ shares}$$

$$\text{Rs.100 (par value per share)}$$

II) Annual dividend requirement on outstanding preferred stock =

$$120,000 \text{ (no of shares)} \times 6(\text{dividend per share})$$

$$= \text{Rs.720, 000}$$

III) Common shares issued and subscribed

$$= \text{Rs.14, 000,000 (total par value)} = 2,800,000 \text{ shares.}$$

$$\text{Rs.5 (par value per share)}$$

IV) Average price per common share received by the business

$$= \frac{14,000,000(\text{total par value}) + 30,800,000 \text{ (additional paid-in-capital)}}{2,800,000 \text{ (shares issued and subscribed)}}$$

$$= \frac{44,800,000}{2,800,000} = \text{Rs.16}$$

v) Amount per common share due from subscribers

$$= \frac{7,200,000 \text{ (subscription receivable)}}{800,000 \text{ shares subscribed}} = \text{Rs.9}$$

i.e.
$$\frac{4,000,000}{5, \text{ par value of share}} = 800,000$$

v)
$$\text{Total legal capital} = 12,000,000 \text{ (preferred)} + 14,000,000 \text{ (common)} = \text{Rs.}26,000,000$$

vii)
$$\begin{aligned} \text{Total paid-in-capital} &= \text{Total legal capital} + \text{additional paid-in-capital.} \\ &= 26,000,000 + 31,160,000 \\ &= 57,160,000 \end{aligned}$$

viii)
$$\text{Book value per common share} = \frac{\text{Common stock equity}}{\text{Total common share}}$$

$$= \frac{\text{Total stockholders' equity} - \text{claim of preferred stockholders at callable price}}{2,800,000}$$

$$= \frac{59,840,000 - (120,000 \text{ shares} \times 102 \text{ callable price})}{2,800,000}$$

$$= \frac{59,840,000 - 12,240,000}{2,800,000}$$

$$= 47,600,000 / 2,800,000$$

$$= \text{Rs.}17$$

Lesson-41

STOCKHOLDERS' EQUITY SECTION OF THE BALANCE SHEET (Continued)

Example No:2

MOOSA CORPORATION

Balance Sheet as on June 30, _____

	2006	2005
Cash	35,000	25,000
Accounts receivable (net)	91,000	90,000
Inventory	160,000	140,000
Short-term prepayments	4,000	5,000
Investment in land	90,000	100,000
Equipment	880,000	640,000
Less: Accumulated depreciation	(260,000)	(200,000)
Total assets	Rs.1, 000,000	Rs.800, 000
	=====	=====

	2005-06	2004-05
Accounts payable	Rs.105, 000	Rs.46, 000
Income taxes payable and Other accrued liabilities	40,000	25,000
Bonds payable – 8%	280,000	280,000
Premium on bonds payable	3,600	4,000
Capital stock Rs.5 par	165,000	110,000
Retained earnings	406,400	335,000
Total liabilities and stockholders' equity	Rs.1, 000,000	Rs.800, 000

MOOSA CORPORATION
Income Statement for the year

	2005-06	2004-05
Sales (net of discount and allowances)	Rs.2, 200,000	Rs.1, 600,000
Cost of goods sold	1,606,000	1,120,000
Gross profit on sales	Rs. 594,000	Rs. 480,000
Expenses (including Rs.22, 400 Interest expense)	(336,600)	(352,000)
Income taxes	(91,000)	(48,000)
Net income	<u>Rs.166, 400</u>	<u>Rs.80, 000</u>

	2005-06	2004-05
1. Quick ratio:		
Rs.126, 000 ÷ Rs.145, 000	0.9 to 1	
Rs.115, 000 ÷ Rs.71, 000		1.6 to 1
2. Current ratio:		
Rs.290, 000 ÷ Rs.145, 000	2 to 1	
Rs.260, 000 ÷ Rs.71, 000		3.7 to 1
3. Equity ratio:		
Rs.571,400 ÷ Rs.1,000,000	57%	
Rs.445,000 ÷ Rs.800,000		56%
4. Debt ratio:		
Rs.428,600 ÷ Rs.1,000,000	43%	
Rs.355,000 ÷ Rs.800,000		44%

Lesson-42

BALANCE SHEET AND INCOME STATEMENT RATIOS

	2005-06	2004-05
5. Gross profit percentage: Rs.594, 000 ÷ Rs.2, 200,000 Rs.480, 000 ÷ Rs.1, 600,000	27%	30%
6. Operating expense ratio: Rs.336, 600 – Rs.22, 400 ÷ Rs.2, 200,000 Rs.352, 000 – Rs.22, 400 ÷ Rs.1.600, 000	14%	20.6%
7. Net income as a percentage of net sales: Rs.166, 400 ÷ Rs.2, 200,000 Rs.80, 000 ÷ Rs.1, 600,000	7.6%	5%
8. Inventory turnover (Assume arrange inventory of Rs.150, 000 for both years) = 1,606,000 ÷ 150,000 1,120,000 ÷ 150,000	10.7 times	7.5 times
9. Accounts Receivable turnover (Assume average accounts receivable Rs.90, 000 for (2004-05) = 2,200,000 ÷ 90,500 1,600,000 ÷ 90,000	24.3 times 17.8 times	
10. Length of operating cycle (Assume 360 working days) = 360 ÷ 10.7 = 34 360 ÷ 24.3 = 15 360 ÷ 7.5 = 48 360 ÷ 17.8 = 20	49 68	

Summary of Ratios

1. Percentage Gross Profit on Turnover = (Gross Profit) / (Sales) x 100.
2. Percentage Gross Profit on Cost of Sales = (Gross Profit) / (Cost of Sales) x 100.
3. Percentage Net Income on Turnover = (Net Income) / (Sales) x 100.
4. Percentage Total Expenses on Turnover = (Total Expenses) / (Sales) x 100.
5. Percentage Operating Profit on Turnover = (Operating profit) / (Sales) x 100.

6. Percentage Operating Profit on Cost of Sales = $(\text{Operating Profit}) / (\text{Cost of Sales}) \times 100$.
7. Net Assets = $(\text{Total Assets}) - (\text{Total Liabilities})$.
8. Solvency Ratio = $(\text{Total Assets}) / (\text{Total Liabilities})$.
9. Net Current Assets = $(\text{Current Assets}) - (\text{Current Liabilities})$.
10. Current Ratio = $(\text{Current Assets}) / (\text{Current Liabilities})$.
11. Acid-Test Ratio = $(\text{Liquid Assets}) / (\text{Current Liabilities})$.
12. Rate of Stock Turnover = $(\text{Cost of Sales}) / (\text{Average Stock})$.
13. Period for which Ample Stock is on Hand = $(\text{Average Stock}) / (\text{Cost of Sales}) \times (365 \text{ days or } 12 \text{ months})$.
14. Debtors Average Collection Period = $(\text{Average Debtors}) / (\text{Credit Sales}) \times (365 \text{ days or } 12 \text{ months})$.
15. Creditors Average Payment Period = $(\text{Average Creditors}) / (\text{Credit Purchases}) \times (365 \text{ days or } 12 \text{ months})$.
16. Debt/Equity Ratio = $(\text{Total Liabilities}) / (\text{Shareholders Equity})$. This is also known as Risk or Gearing, the extent to which a company is financed by borrowed funds; for example, if a company is highly geared, it borrows a lot.
17. Return on Total Capital Employed = $((\text{Net Profit before Tax}) + (\text{Interest on Loan})) / (\text{Average Capital Employed}) \times 100$.
18. Return on Shareholders' Equity = $(\text{Net Profit after Tax}) / (\text{Average Shareholders' Equity}) \times 100$.
19. Earnings per Share = $(\text{Net Profit after Tax}) / (\text{Number of Shares Issued}) \times 100$.
20. Dividends per Share = $(\text{Dividends on Ordinary Shares}) / (\text{Number of Shares Issued}) \times 100$.
21. Net Asset Value per Share = $(\text{Shareholders' Equity}) / (\text{Number of Shares Issued}) \times 100$.
22. Net Profit before Tax on Turnover = $(\text{Net Profit before Tax}) / (\text{Turnover}) \times 100$.

Lesson-43**CASE STUDY****Assumption**

The company you have chosen has hired you as a financial consultant.

Assignment

Based on your analysis of the firm's financial statements and any relevant supplementary information you can obtain about the firm and its operating environment, identify areas in which the company is performing well (strengths) and problem areas (weaknesses); Also advise management of corrective measures for improvement.

Data

The time period for the analysis should include five full years or four years plus interim statements for the most recent year. In addition to the financial statements and other material in the annual reports, you should review relevant materials from outside sources such as newspapers, periodicals and investment resources.

Outline

The following outline is provided for guidance, but the analysis should be adjusted, as appropriate, to conform to the individual characteristics of the firm.

Suggested Outline for the Financial Statement Analysis

- I. Introduction
 - A. Objective of paper
 - B. Summary of Findings
- II. Firm, Industry, and Environment
 - A. Description of firm and its management
 - B. Discussion of competitive environment
 - C. Economic climate and outlook
 - D. Other factors, e.g. governmental regulations, Labour relations, Litigations.
- III. Evaluation of Financial Statements
 - A. Overview
 - B. Short-term liquidity
 - C. Operating efficiency
 - D. Capital structure and long-term solvency
 - E. Profitability
 - F. Market measures
- IV. Outlook, Summary, and Conclusions
 - A. Outlook for performance, earnings projection
 - B. Summary and Conclusions

Table-1

XYZ SUGAR MILLS
BALANCE SHEET AS ON JUNE 30, .

Rs. in million

Year	1977	1978	1979	1980
CAPITAL & LIABILITIES				
Owners' equity				
Original Investment by the Controlling Corporation (CC)	10	10	10	10
Current A/C with CC	55	59	65	71
Total equity	65	69	75	81
Less accumulated losses	66	82	94	114
Net equity	(1)	(13)	(19)	(33)

Current Liabilities

	1977	1978	1979	1980
Short-term borrowing	25	26	29	37
Trade creditors (liabilities for expenses)	7	12	11	4
Liabilities for other finances	8	17	13	10
	40	55	53	51
Fixed Liabilities				
Long-term loans	10	13	15	20
Total capital & Liabilities	49	55	49	38

Assets

Fixed assets	16	15	14	14
Current assets				
- Cash	5	4	3	2
-Receivable from Bibo	12	13	15	17
-Other Receivables	2	2	3	3
-Pre-paid	1	1	1	1
- Inventory	13	20	13	1
Total current assets	33	40	35	24
Total Assets	49	55	49	38

ANALYSIS OF BALANCE SHEET

No.	Table	Data/Facts	Findings
1	1	Balance Sheets for the year 1976-80	<ul style="list-style-type: none"> Accumulated losses (Rs.114 million as at June 30, 1980) Constantly losing enterprise.
2	2	Accumulated losses over the period.	<ul style="list-style-type: none"> Losses increasing over the years.
3	1	Balance Sheet	<p>a) Capital cost of the project was Rs.26 million, met through:</p> <ul style="list-style-type: none"> - Equity Fund from CC Rs.10 million. - Loans from CC: Rs.16 million <p>b) "Current account with "CC" comprises, funds given by CC over the years as working capital.</p> <p>c) Total equity as on 30.06.1980 = Rs.81 million.</p> <p>d) Equity completely eroded by accumulated loss of Rs.114 million.</p> <p>e) Equity eroded since 1976-77</p>
4	1	Borrowing (short-term & long term)	<p>a) Increased from Rs.35 million in 1976-77 to Rs.57 million in 1979-80.</p> <p>b) Debt burden increasing because of unit's inability to repay the principal owing to persistent losses.</p> <p>c) Vicious circle.</p> <p>d) Huge financial charges (Rs.8 million during 1979-80)</p>

Lesson-44

ANALYSIS OF BALANCE SHEET & INCOME STATEMENT

5	1	Fixed Assets	a) Decreasing. b) No depreciation reserve (unable to replace old assets out of its own resources).
6	1	Current Assets: h Bibo:Rs.17 m -Book debt = Rs.6.71 m on 30.06.72 -Interest over the= Rs.10.29 m period 1972-80 _____ 17 m	<ul style="list-style-type: none"> • Bibo had made counter claims • These are doubtful debts. • No provision for bad debts. • Liquidity overstated. • Interest treated as miscellaneous Income. • Treating interest as misc. income understated operating losses by Rs.10.29 million. • Accumulated loss rises from 114 million to 124 million.
7	1	Other Receivables	<ul style="list-style-type: none"> • Loans given to cane growers. • Aging detail. • Loans of Rs.0.5 million outstanding for 6-10 years. • Doubtful/bad loans. • No provision. • Liquidity overstated.
8	3	Liquidity	<ul style="list-style-type: none"> • Current and quick ratios. • Poor liquidity. • Actual ratios much lower in view of doubtful debts. • Cannot repay its current obligations.

Table-2
ACCUMULATED LOSS

Rs. in million

At the end of year	1976-77	1977-78	1978-79	1979-80
Loss for the year	9.5	16.0	12.03	19.8
Accumulated loss	66.0	82.0	94.3	114.1
% increase in accumulated loss over base year (1976-77)		24%	43%	73%

Table-3
CURRENT AND QUICK RATIOS

Rs. in million

Year end June 30	1977	1978	1979	1980
Current assets	33	40	35	24
Current assets less inventory & pre-paid	19	19	21	22
Current liabilities	40	55	53	51
Current ratio	0.8:1	0.7:1	0.6:1	0.5:1
Quick ratio	0.5:1	0.3:1	0.3:1	0.4:1

Table-4

XYZ SUGAR MILLS
PROFIT AND LOSS ACCOUNT

Rs. in thousands

Year	1976-77		1977-78		1978-79		1979-80	
Sales	58,000	%	52,000	%	42,000	%	20,000	%
Cost of Sales								
Cane, carriage & incidentals	35,000	60	38,000	73	24,000	57	16,000	80
Salaries & Wages	6,000	10	7,000	13	6,000	14	6,000	30
Excise duty	15,000	26	11,000	21	11,000	26	2,000	10
Depreciation	1,000	2	1,000	2	800	2	800	4
Others	3,000	5	3,400	7	3,000	7	2,000	10
Total:	60,000	103	60,400	116	44,800	106	26,800	134
Gross Profit (loss)	(2,000)	3	(8,400)	16	(2,800)	6	(6,800)	34

Operating & non-operating expenses

Admin & selling	3,000	5	3,000	5	4,000	10	5,000	25
Financial	4,500	8	4,600	9	5,500	13	8,000	40
Total:	7,500	13	7,600	14	9,500	23	13,000	65
Operating (loss)	(9,500)	16	(16,000)	30	(12,300)	29	(19,800)	99

‘Others’ consist of:

- Cloth & packing material
- Stores & Spares
- Insurance

ANALYSIS OF PROFIT & LOSS ACCOUNT

No.	DATA/FACTS/DOCUMENTS	FINDING
1.	Table-4 Profit & Loss Accounts	<ul style="list-style-type: none"> Bottom line figures: operating losses. Never made profit.
2.	Table-4 -do-	<ul style="list-style-type: none"> Various costs as % of sales. Constantly reducing sales.
3.	Table-5 Production and capacity Utilization.	<ul style="list-style-type: none"> Reduced sugar production. Below capacity utilization.
4.	Non availability of cane; feasibility report	<ul style="list-style-type: none"> Erroneous assumption in PC 1
5.	Table-6 Sugarcane procured locally	<ul style="list-style-type: none"> Only 5 to 44% of plant's requirement (of 185,000 tons) met locally.
6.	Table-7 Total procurement of cane.	<ul style="list-style-type: none"> Cane crushing capacity = 1500 tons/day normal crushing season = 120 days. Full requirement of cane never met. During 1979-80, growers switched to turmeric, they also preferred gurmaking due to its high price.
7	Table-8 Area-wise procurement of sugar-cane	<ul style="list-style-type: none"> Between 42% to 60% cane brought from far-off places. Result was excessive cost of transportation, drying up of cane (less recovery percentage).
8	Table-9 Cost of transportation	9% to 14% of cost of cane.
9	Table-10 Per ton cost of transportation.	<ul style="list-style-type: none"> Between Rs.15 to 21. Double the cost of other factories.
10	Table-4 P&L Account Cane, Chemical and incidentals.	<ul style="list-style-type: none"> High percentage of sale revenues. Include increased cost of transportation.

11	Table-4 Salaries, Wages and benefits.	<ul style="list-style-type: none"> Constantly increasing as % of sales. Heavy fixed cost due to: <ul style="list-style-type: none"> normal increases. increase in employee strength.
12	Table-11 Employees strength	<ul style="list-style-type: none"> 53-73% over PC1 strength/seasonal staff as routine.
13	Table-12 Cost of establishment per ton of sugar produced	<ul style="list-style-type: none"> Very high due to:- <ul style="list-style-type: none"> excess employees. reduced production.
14	Table-13 Productivity per employee	<ul style="list-style-type: none"> Decreasing.
15	Table-4 Administrative expenses	<ul style="list-style-type: none"> Increasing as % of sales. Excess employee strength.
16	Table-4 Financial expenses Table-14	<ul style="list-style-type: none"> Increasing as % of sales (range: 8% to 40%) Why? Because of increased debt burden, and Unit's inability to pay owing to persisting losses: vicious circle.

Table-5
PRODUCTION AND CAPACITY UTILISATION
TONS

	1976-77	1977-78	1978-79	1979-80
Cane crushing capacity	185,000	185,000	185,000	185,000
Cane crushed	140,292	166,271	93,931	14,375
Capacity utilization	76%	90%	51%	8%
Sugar produced	11,344	14,015	8,007	1,206
% recovery	8.08%	8.43%	8.55%	8.38%

Table-6
PROCUREMENT OF SUGAR CANE LOCALLY

	1976-77	1977-78	1978-79	1979-80
Quality procured (Tons)	81,444	81,367	37,857	8,392
Procurement as % of total requirements.	44%	44%	20%	5%

Table-7
TOTAL PROCUREMENT OF SUGAR-CANE

	1976-77	1977-78	1978-79	1979-80
• Cane procured (tons)	140,292	166,271	93,731	14,375
• % of requirement	76%	90%	51%	8%

Table-8
AREA-WISE PROCUREMENT OF SUGAR-CANE

TONS

	1976-77		1977-78		1978-79		1979-80	
	Qty	%	Qty	%	Qty	%	Qty	%
Sugar-cane produced from								
• Local area	81444	58%	81367	49%	37857	40%	8392	58%
• A Distt. (200km North)	28316	20%	44415	27%	15976	17%	801	6%
• B Distt. (150km South)	12395	9%	18361	11%	19164	20%	2439	17%
• C Area (150km East)	16707	12%	18268	11%	12870	14%	2627	18%
• D Area (300km West)	1430	1%	3860	2%	7864	9%	116	1%
Total:	140,292	100%	166,271	100%	93,731	100%	14,375	100%

Lesson-45

SUMMARY OF FINDINGS

Table-9
COST OF TRANSPORTATION

	1976-77	1977-78	1978-79	Rs. in million 1979-80
Cost of cane purchased	22.26	24.51	13.81	2.60
Carriage & incidentals	2.15	3.48	1.95	0.23
Carriage as % of cost	10%	14%	14%	9%

Table-10
PER TON COST OF TRANSPORTATION

	1976-77	1977-78	1978-79	1979-80
Carriage and incidentals (Rs. in million)	2.15	3.48	1.95	0.23
Cane procured (Tons)	140,292	166,271	93,731	14,375
Average per ton cost (Rs)	15.32	20.92	20.80	16.00

Table-11
EMPLOYEE STRENGTH
Actual strength during the years

	As per PC1	1976-77	1977-78	1978-79	1979-80
Permanent	185	605	625	615	495
Seasonal	556	639	655	590	638
Total	741	1244	1280	1205	1133
% increase		68%	73%	63 %	53%

Table-12
COST OF ESTABLISHMENT

	1976-77	1977-78	1978-79	1979-80
Cost (Rs. in million)	7.72	9.11	8.90	8.51
Sugar produced (tons)	11344	14015	8007	1206
Cost per ton of sugar (Rs)	681	650	1112	7053

Table-13

PRODUCTIVITY PER EMPLOYEE

	1976-77	1977-78	1978-79	1979-80
Sugar produced (Tons)	11344	14015	8007	1206
Employee-strength	1244	1280	1205	1133
Productivity per person (Tons)	9.1	10.9	6.6	1.1

Table-14
FINANCIAL EXPENSES

Rs. in million

	1976-77	1977-78	1978-79	1979-80
Financial expenses	4.5	4.6	5.5	8.0
Sales	58	52	42	20
Financial expenses as % of sales	8%	9%	13%	40%

SUMMARY OF FINDINGS

No.	Area	Findings
1.	Finance:	<ul style="list-style-type: none"> Financial position poor Equity eroded Debt burden: Rs.57 m Financial Charges: Rs.8 m Poor Liquidity
2.	Profitability:	<ul style="list-style-type: none"> Constantly losing. Losses understand. <p>Reasons:</p> <ul style="list-style-type: none"> not enough cane high transportation cost. heavy fixed costs. vicious circle of financial charges
3.	Raw Material:	<ul style="list-style-type: none"> Requires 185,000 tons cane. Cane from local area: 5-44% only. Bringing cane from far off places. erroneous PC1
4.	Production:	<ul style="list-style-type: none"> sugar production capacity: 15,000 ton Never met target. High fixed cost of production.
5.	Administration:	<ul style="list-style-type: none"> Excess employees. Excess per ton cost of establishment. Low productivity.

OVERALL ASSESSMENT

1. The unit has been a losing concern over since 1965 when it became operational. Accumulated loss as on June 30, 1980 was over Rs.114 million as against equity of Rs.81 million. Equity thus stood completely eroded. The unit is consequently dependent entirely on debt, which amounted to Rs.57 million as on June 30, 1980. This involved annual financial charges of Rs.8 million.
2. The feasibility of this unit had been projected on the clear assurance that abundant sugar-cane will be available in the vicinity. These assurances proved entirely erroneous. Supplies of sugar-cane from the vicinity were very inadequate. The company has had to supplement procurement by additional purchases from distant areas. This involved excessive cost of transportation. Even then the unit could not manage to procure the required quantity of cane. Below capacity operations of the plant has, therefore, been a crippling constraint.
3. A number of steps are being taken at unit and government level to improve sugar-cane availability. This includes loans to growers for seeds and fertilizers, and award of a higher purchase price for sugar-cane above the controlled rate. These measures are expected to aid the project but it may not, however, still be able to overcome its financial difficulties.
4. The unit could in fact procure only 8% of its cane requirement during 1979-80, of which only 5% was procured locally, despite award of a higher purchase price for sugar-cane above the controlled rate. Inadequate cane availability and heavy fixed costs (due to excessive employee-strength and increasing burden of financial charges) remain serious constraints.
5. The project therefore does not seem to be a viable one. Prospects of its disinvestment and privatization may be seriously looked into.