

## □ Accounting:-

Accounting is the process of identifying, measuring, recording and communicating the economic event of an organization to the interested users of the information.

## □ Users of accounting data:-

(i) Internal users:- Internal users of accounting information are managers who plan, organize and run the business. These include marketing managers, financial directors, production supervisors and company officers.

## (ii) External users:-

External users are individuals and organizations outside a company who want financial information. The two most common types of external users are investors and creditors. Investors use accounting information to decide whether to buy, hold or sell ownership shares of the company. Creditors use accounting information to evaluate the risks of granting credits or lending money.

### Basic accounting equation:-

$$\text{Assets} = \text{Liabilities} + \text{Owner's Equity}$$

### Assets:-

Assets are resources a business owns. The business uses its assets in carrying out such activities as production and sales. The common characteristic possessed by all assets is "the capacity to provide future services or ~~products~~ benefits."

Example:-

Delivery truck, tables, chairs, cash box, cash are assets for a restaurant.

### Liabilities:-

Liabilities are claims against assets - that is existing debts and obligations. Businesses of all sizes usually borrow money and purchase merchandise on credit. These economic activities result in payable various sorts.

Creditor claims needs to be paid before ownership claims.



### □ Owners equity:-

The ownership claim on total asset is owner's equity. It is equal to total assets minus total liabilities. Here is why: The assets of a business are claimed by either creditors or owners. To find out what belong to owners we subtract the creditors' claims (liabilities) from assets. The remainder is owner's claim on the assets, the owner's equity. Since the claims of creditors must be paid before ownership claims, owner's equity is often referred to as residual equity.

\* Increases in owner's equity:- Owner's investments and revenues increase owner's equity.

\* Decrease in owner's equity:- Owner's drawings and expenses decrease owner's equity.

### □ Investments by owner:-

Investments by owner are the assets the owner puts into the business. These investments increase owner's equity. They are recorded in a category called owner's capital.



### Revenues:-

Revenues are the gross increase in owner's equity resulting from business activities entered into for the purpose of earning income. Generally, revenues result from selling merchandise, performing services, renting property and lending money. Common sources of revenue are sales, fees, services, commission, rent etc. Revenues usually result in an increase in an asset.

### Drawings:-

An owner may withdraw cash or other assets for personal use. We use a separate classification called drawings to determine the total withdrawals for each accounting period. Drawings decrease owner's equity. They are recorded in a category called owner's drawings.

### Expenses:-

Expenses are the cost of assets consumed or services used in the process of earning revenue. They are decreases in owner's equity.



□ Expanded accounting equation: -

$$\text{Assets} = \text{Liabilities} + \text{Owner's capital} - \text{Owner's drawings} + \text{Revenue} - \text{Expenses}$$

□ Transactions: -

Transactions are business's economic event that has dual effect on basic accounting equation.

Companies carry on many activities that do not represent business transactions. Examples are hiring employees, responding to emails, talking with customers and placing merchandise orders are not transactions. Some of these activities may lead to transaction. The company must analyze each event to find out if it affects the components of the accounting equation.

Ex- Purchasing equipments from suppliers, payment of monthly rent to land lord, paying salary to employee etc.

## Transaction analysis:-

(1) Investment by owner:- Ray Neal starts a smart-phone app development company Softbyte. On September 1, 2017, he invests \$15,000 cash in the business.

$$\underline{\text{Assets}} = \underline{\text{Liabilities}} + \underline{\text{O.E.}}$$

$$\begin{array}{ccc} \underline{\text{Cash}} & = & \underline{\text{Owner's capital}} \\ (1) + \$15,000 & = & + \$15,000 \end{array}$$

Investment by owner do not represent revenue and they are excluded in determining the net income.

(2) Purchase of equipment for cash:- Softbyte purchases computer equipment for \$7000 cash.

$$\begin{array}{ccc} \underline{\text{Assets}} & = & \underline{\text{Liabilities}} + \underline{\text{Owners Equity}} \\ \underline{\text{cash} + \text{Equipment}} & = & \underline{\text{owner's capital}} \\ \$15,000 & & + \$15,000 \\ (2) \begin{array}{cc} -\$7,000 & + \$7,000 \\ \hline \$8,000 & \$7,000 \end{array} & = & \\ \hline \underbrace{\$8,000 + \$7,000}_{\$15,000} & & \$15,000 \end{array}$$



(3) Purchase of supplies on credit:- Softbyte purchases for \$1,600 from Mobile Solutions headsets and other computer accessories expected to last several months. Mobile Solution agrees to allow softbyte to pay this bill on October.

This transaction is a purchase on account.

Assets			=	Liabilities + O.E	
Cash	Supplies	Equipment	=	Account Payable	Owner's Capital
\$8,000		\$7,000	=		\$15,000

$$\begin{array}{rcl}
 (3) & \begin{array}{c} +\$1,600 \\ \$8,000 + \$1,600 + \$7,000 \end{array} & = \begin{array}{c} +\$1,600 \\ \$1,600 + \$15,000 \end{array} \\
 & \underbrace{\hspace{10em}} & \underbrace{\hspace{10em}} \\
 & \$16,600 & \$16,600
 \end{array}$$

(4) Services performed for cash:- Softbyte receives \$1,200 cash from customer for app development service.

Assets			=	Liabilities + O.E	
Cash	Supplies	Equip.	=	Acc. pay.	Own. Cap. + Revenue
\$8,000	\$1,600	\$7,000	=	\$1,600	\$15,000
(4) +\$1,200					+\$1,200
\$9,200	\$1,600	\$7,000	=	\$1,600	\$15,000 + \$1,200
<u>\$17,800</u>				<u>\$17,800</u>	



(5) Purchase of advertising on credit: - Softbyte receives a bill for \$250 from the Daily News for advertising on its online website but postpones payment until a later date.

Assets

= Liabilities + O.E.

Cash + Supplies + Equipment = Acc. pay. + Ow. cap. + Rev. - Exp.

\$9,200    \$1,600    \$7,000    =    \$1,600    \$15,000    \$1,200

(5)  $\frac{\$9,200 + \$1,600 + \$7,000}{\$17,800} = \frac{\$1,850 + \$15,000 + \$1,200 - \$250}{\$17,800}$

(6) Services performed for cash and credit: - Softbyte performs \$3,500 of app development services for customers. The company receives cash of \$1,500 from customer and it bills the balance \$2,000 on account.

Assets

= Liabilities + O.E.

Cash + Account receivable + Supplies + Eq. = Account payable + Owner's Capital + Revenues - Expense

\$9,200 + \$1,600 + \$7,000 = \$1,850 + \$15,000 + \$1,200 - \$250

(6) + \$1,500 + \$2,000 = + \$3,500

\$10,700    \$2,000    \$1,600    \$7,000    =    \$1,850    \$15,000    \$4,500    - \$250

\$21,300 = \$21,300



(7) Payment of expenses: - Softbyte pays the following expenses in cash for September: office rent \$600, salaries and wages of employees \$900 and utilities \$200.

Assets = Liabilities + B.E.

Assets				Liabilities + B.E.			
Cash	Accounts receivable	Supplies	Equ.	Account Payable	Owner's Capital	Rev.	Exp
\$10,700	\$2,000	\$1,600	\$7,000	\$1,850	\$15,000	\$4,700	\$250
(+) - \$1,700							- \$1,700

$$\begin{aligned}
 & \$9,000 + \$2,000 + \$1,600 + \$7,000 = \$1,850 + \$15,000 + \$4,700 - \$1,950 \\
 & \qquad \qquad \qquad \underline{\$19,600} \qquad \qquad \qquad \underline{\$19,600}
 \end{aligned}$$

(8) Payments of account payable: - Softbyte pays it \$250 daily news bills in cash.

Assets = Liabilities + B.E.

Assets				Liabilities + B.E.			
Cash	Acc. recei.	Supplies	Equ.	Account pay.	Own. Cap.	Rev.	Exp.
\$9,000	\$2,000	\$1,600	\$7,000	\$1,850	\$15,000	\$4,700	\$1,950
(-) - \$250				- \$250			
$  \begin{aligned}  & \$8,750 + \$2,000 + \$1,600 + \$7,000 \\  & \qquad \qquad \qquad \underline{\$19,350}  \end{aligned}  $				$  \begin{aligned}  & \$1,600 + \$15,000 + \$4,700 - \$1,950 \\  & \qquad \qquad \qquad \underline{\$19,350}  \end{aligned}  $			

(9) Receipt of cash on account: - Softbyte receives \$600 cash from customers who had been billed for services.

Assets				=	L	+	OE.
Cash	Acc. Rec.	Supplies	Equ.	=	Acc. pay.	+ own. Cap.	+ Rev. - Exp.
\$8,750	\$2,000	\$1,600	\$7,000	=	\$1,600	\$15,000	\$4,700 - \$1,950
(9) +\$600	-\$600						
<u>\$9,350 + \$1,400 + \$1,600 + \$7,000</u>				=	<u>\$1,600 + \$15,000 + \$4,700 - \$1,950</u>		
\$19,350					\$19,350		

(10) Withdrawal of cash by owner: - Neal withdraws \$1,300 in cash from business for his personal use

A				=	L	+	OE.
Cash	Acc. Rec.	Sup.	Equ.	=	Acc. pay.	owners drawings	owners cap. + Rev. - Exp.
\$9,350	\$1,400	\$1,600	\$7,000	=	\$1,600	\$	\$15,000 + \$4,700 - \$1,950
(10) -\$1,300						-\$1,300	
<u>\$8,050 + \$1,400 + \$1,600 + \$7,000</u>				=	<u>\$1,600 - \$1,300 + \$15,000 + \$4,700 - \$1,950</u>		
\$18,050					\$18,050		



## 7 steps of accounting cycle:-

1. Preparation of journal.
2. Preparation of ledger.
3. Preparation of trial balance.
4. Preparation of financial statements.
5. Analysis of financial statement.

## Rules of GAAP:- (Generally Accepted Accounting Principles)

1. Principles

2. Assumptions

3. Constrains

## Principles:-

### (1) Historical cost principles:-

Assets have two values - book value and market value. Book value is the value of purchase of that asset. And, market value is the present market price of that asset. In accounting record, book value must be recorded, because the market value fluctuates.

### (2) Revenue recognition principles:-

Revenue is earned from selling product or service. Revenue must be recorded iff product is

sold and payment is received. That is, revenue realized.

### (3) Matching principles:-

All expenses must be matched in the same accounting period as the revenue they helped to earn.

### (4) Full disclosure principles:-

Such informations, that help the buyer to make decisions are called material information.

All material information must be represented to buyer and must not be hidden.

### □ Assumptions:-

#### (1) Economic / separate entity assumption:-

It is assumed that any organization has separate economic entity. Records will be recorded in the name of the organization.

#### (2) Monetary value assumption:-

It is assumed that every transaction has an



extra monetary value, for example, a product of nike and reebok has different transaction value. It is also referred as brand value.

### (3) Going concerned assumption:-

When organization is formed, it is assumed that the organization will remain or go on for unlimited time.

### (4) Periodicity assumption:-

A particular period of time is assumed and all records are recorded for that particular period.

### □ Constrains / Limitations:-

#### (1) Cost benefit relationship:-

In accounting, it is always assumed that the benefit will always be more than the cost. There is no social perspective and only profit oriented steps are taken.

Ex- Bank scholarship or social activity is arranged for publicity or creating good value.

### (2) Materiality:-

'Material information' - does not have a specific definition. It is relative. In different situation it has different meaning.

### (3) Conservatism:-

Assets should not be presented more, in amount and liabilities should not be presented less.

### (4) Industrial practice:-

There are three types of organizations, Manufacturing, merchandise and service.

Same type of organizations should be compared because the recording process of organizations vary for different type.

Ex - Cash is revenue to bank but asset for other type of organization.



□ Journal book: - (गणित व शि)

Record of all transactions sequentially and according to debit and credit for a particular period of time.

• Rules for journal:-

(1) Personal account:- Account related with person or organization.

\* person/organization that receives benefit - debit

\* :  $\frac{1}{\sqrt{1-\beta^2}}$  gives... credit

(2) Asset acc./Real acc. :- Acc. related to assets -

- \* Increase in asset - debit

- \* Decrease in asset - credit

(3) Nominal account:- Acc. related to revenue or expense

\* Increase in expense - debit

\* Decrease in expense-credit

- \* Increase in revenue - credit

- \* Decrease in revenue - debit

(4) Liability account:-

\* Increase in liability - credit

\* Decrease in liability - debit

Asset ↑	debit	Asset ↓	credit
Expense ↑	debit	Expense ↓	credit
Revenue ↑	credit	Revenue ↓	debit
Liability ↑	credit	Liability ↓	debit

Ex-1

1. Owner invests taka 5,00,000 as capital.
2. 50,000 is earned from sales
3. Salary paid to employees 50,000
4. Loan taken from bank 5,00,000
5. Owner invested 5lac and machine ~~bought with~~ 2lac
6. Bought raw material with 1lac. cash.
7. Bought raw material with 1lac. due from Mr. Rahim.
8. Full settlement to Mr. Rahim with discount allowed 5000.
9. Received 50,000 from sales
10. Products sold to Karim and Sons on due 50,000 to
11. Discount allowed to K. and S. 5,000 full settlement.



# Journal Book

"X" + (company name)

For the month of February  
(or for the period ended...)

Date	Particulars	Ref.	Dr.	Cr.
01.02.2018	Cash A/c Dr To capital A/c	- -	5,00,000 -	 5,00,000
02.02.2018	Cash A/c Dr To sales A/c	- -	50,000 -	 50,000
03.02.2018	Salary A/c Dr To cash A/c	- -	50,000 -	 50,000
04.02.2018	Cash A/c Dr To Bank A/c	- -	5,00,000 -	 5,00,000
06.02.2018	Cash A/c Dr Machine A/c Dr To capital A/c	- - -	5,00,000 2,00,000 -	  7,00,000
16.2.2018	Purchase A/c Dr To cash A/c	- -	1,00,000 -	 1,00,000
17.2.2018	Purchase A/c Dr To Mr. Rahim account payable	- -	1,00,000 -	 1,00,000
24.2.18	Mr. Rahim A/c Dr To cash A/c To discount received A/c	- - -	1,00,000 - -	 95,000 5,000

26.2.18	Cash A/C dr	—	50,000	
	To sales A/C	—		50,000
27.2.18	Karim and Sons A/C dr	—	50,000	
	To cash A/C	—		50,000
29.2.18	Discount allowed A/C dr	—	5,000	
	Cash A/C dr	—	45,000	
	To Karim and Sons A/C	—		50,000
			22,50,000	22,50,000

\* If investment is a loan from "X" :- To loan A/c

\* Org. brought machine with slac: —  
Machine A/C dr  
To cash A/C

\* Org. bought machines with slac by check: —  
Machine A/C dr  
To Bank A/C

\* Org. bought office equipment 1,50,000/- from Mr X on due: —

Office equipment A/C dr  
To Mr. X A/C

\* Room rent paid on cash 5000/-

Rent A/C dr  
To cash A/C



Ledger account:-  
(प्रविष्टि विवर)

(1) Debit → To xxx

(2) credit → By xxx

### Cash Ledger

Date	Exp.	Ref.	Dr	Cr.	Balance
01.02.2018	To capital A/c	-	5,00,000	-	5,00,000
02.02.2018	To Sales A/c	-	50,000	-	5,50,000
03.02.2018	By Salary A/c	-	-	30,000	5,20,000
04.02.2018	To Bank loan A/c	-	5,00,000	-	10,20,000
05.02.2018	To capital A/c	-	5,00,000	-	15,20,000
24.02.2018	By Mr. Rahim A/c	-	-	95,000	14,25,000
26.02.2018	To sales A/c	-	50,000	-	14,30,000
27.02.2018	By 'X' and Sons A/c	-	-	50,000	13,80,000
28.02.2018	To 'X' and Sons	-	45,000	-	14,25,000

### Sales Ledger

Date	Exp.	Ref.	Dr.	Cr.	Balance
2.2.2018	By Cash A/c	-	-	50,000	-50,000
26.2.2018	By cash A/c	-	-	50,000	-100,000

### Discount Ledger

Date	Exp.	Ref.	Dr.	Cr.	Balance
28.2.2018	To 'X' and Sons	-	5,000	-	5,000



### Capital Ledger

Date	Exp.	Ref.	Dr	Cr	Balance
2.2.2018	By cash A/c	-	-	50,000	-5,00,000
5.2.2018	By cash A/c	-	-	5,00,000	-10,00,000
3.2.2018	By office equipment A/c	-	-	2,00,000	-12,00,000

### Purchase Ledger

Date	Exp.	Ref.	Dr	Cr	Balance
16.2.2018	To Mr 'x' A/c	-	1,00,000	-	1,00,000
17.2.2018	To Account Payable A/c	-	1,00,000	-	2,00,000

□ Trial balance: (3327212)

Particulars/Accounts	LF	Dr	Cr
Purchase	-	xxx	-
Sales	-	-	xxx
cash/Bank	-	xxx	-
Debtor	-	xxx	-
Creditors	-	-	xxx
Opening stock	-	xxx	-
Bad debts	-	xxx	-

\* Ledger folio - LF



- \* Debtors → (દારુર) → Asset
- \* Creditors → (મરજનર) → Liabilities
- \* Opening stock → Raw material was unused, then it was used during production.
- \* Closing stock → Already included in purchase. So, not mentioned/calculated again.
- \* Bad debts → (ગરમુત દારુર). If debtor is died or somehow it is not possible to get the money from debtor.
- \* Provision for bad debt → (ગરમુત દારુર અંકર).
- \* Capital A/c → Liabilities

## □ Financial Statements:-

① Financial statements for manufacturing org. :-

1. Trading account (પ્રત્ય-વિત્તીય હિસા)
2. Profit and loss account (નર-પરિતિ હિસા)
3. Balance sheet (સંતરિતિ હિસા)

② Financial statements for merchandise org. :-

1. Income statements
2. Cash flow statement
3. Owner's equity statement
4. Balance sheet

#### (1) Trading account:-

##### Trading Account

Abdullah & Sons

For the year ended XXX

dr		Cr	
Particulars	Amount	Particulars	Amount
Opening stock —	xxx	Sales — xxx	
Purchases — xxx		(-) Return — xxx	xxx
(-) Return — xxx	xxx		
Wages — xxx		Closing stock	xxx
Advanced/Unpaid — xxx	xxx		
Freight and duty — xxx			
Gross profit —	xxx		
	xxx		xxx

May also include Govt. duty, clearing charges and items of a like nature forming part of the cost of goods.



(2) Profit and loss account:-

Profit & Loss Account

Abdullah and sons

for the year ended xxx

Particulars	Amount	Particulars	Amount
Interest paid	xxx	Gross profit	xxx
Discount allowed	xxx	Interest received	xxx
Commission allowed	xxx	Discount	xxx
Carriage	xxx	Commission	xxx
Rent	xxx		
± Advanced/ due	xxx		
Insurance	xxx		
± Advanced/ Unpaid	xxx		
<u>Depreciation:-</u>			
Furniture	xxx		
Building	xxx		
Machinery	xxx		
Net profit	xxx		
	xxx		xxx

### (3) Balance Sheet:

#### Balance Sheet

Abdullah & Sons

As on xxx

Liabilities	Amount	Assets	Amount
Capital — xxx	xxx	Building — xxx	
Profit — xxx		(-) Depreciation — xxx	xxx
xxx		Machine — xxx	
(-) Withdrawal — xxx		(-) DP — xxx	xxx
xxx			
(-) Income tax — xxx	OE ↑ (xxx)	Furniture — xxx	
		(-) DP — xxx	xxx
Creditors — xxx	xxx		
Bank loan — xxx	xxx	Debtors — xxx	
Account pay — xxx	xxx	(-) Bad debts — xxx	
		xxx	
<u>Unpaid expenses:</u>		(-) Provision for bad debts — xxx	xxx
wages — xxx			
Rent — xxx		closing stock — xxx	xxx
Salary — xxx — xxx	xxx	A/c receivable — xxx	xxx
		cash and bank — xxx	xxx
		Advanced exp.:-	
		Rent — xxx	
		Insurance — xxx	xxx
	xxx		xxx



Ex- Prepare 'trading' and 'profit and loss' account and balance sheet of 'Abdullah and Sons' as at 31st december, 2017 from the following trial balance and additional information.

Abdullah and Sons

Particulars	L.F.	Dr	Cr
1. Opening a stock		50,000	-
2. Purchase (expense)		1,25,000	-
3. Bills receivable (Asset)		13,200	-
4. Sales (Revenue)		-	2,60,000
5. Sales return		2,000	-
6. Purchase return		-	1,200
7. Discount		300	250
8. Carriage outwards		(allow) 500	(receive)
9. Salary		10,000	-
10. Insurance (Expense)		1,200	-
11. Rent		3,000	-
12. Sundry debtors (asset)		45,000	-
13. Sundry creditors (Liability)		-	30,000
14. Income tax (expense)		900	-

15. Cash and banks	5,000	-
16. Furniture	5,000	-
17. Bad debts	2,000	-
18. Plant and machine	80,000	-
19. Freight and duty (20%)	1,500	-
20. Wage	20,000	-
21. Provision for bad debt (liability)	-	1,750
22. Capital	-	71,400
23. Drawings (expense)	5,000	-
	3,64,600	3,64,600

#### Additional information:-

1. Closing stock on 31st december, 2017 was valued taka 60,000
2. The provision for bad debts is to be maintained at 5% sundry debtors.
3. Total bad debt to be written off during the year were taka 3,200
4. outstanding liabilities :-
  - a) Salaries taka 2000
  - b) wages taka 3000



5. Rent and insurance paid during the year were for 15 and 18 months respectively.

6. Depreciate:-

a) Furniture and fittings by 5%.

b) Plant and machinery by 10%.

Soln:

### Trading Account

Abdullah & Sons.

For the year ended 31st Dec. 2017

Particular	Amount	Particular	Amount
Opening stock -	50,000	Sales - 2,60,000	
Purchases - 1,25,000		(-) Return - 2,000	
(-) Return 1,200			2,58,000
	1,23,800	closing stock -	60,000
Wages - 15,000			3,18,000
(+) Outstand - 3,000	18,000		
Fright and duty -	1,500		
(Gross profit) →	1,24,700		
	3,18,000		

Profit & Loss Account  
Abdullah & Sons  
For the year ended 31st Dec. 2017

Particulars	Amount	Particulars	Amount
Discount Allowed -	300	Gross profit -	1,24,700
Carriage outwards -	500	Discount received -	250
Salary -	10,000		
(+) Outstanding -	2,000		
	12,000		
Rent -	3,000		
(-) Advanced -	600		
	2,400		
Insurance -	1,200		
(-) Advanced -	400		
	800		
Bad debts -	3,200		
(+) Provision to bad debt -	2190		
	5,390		
(-) Existing provision -	1,750		
	3,640		
<u>Depreciation:-</u>			
Furniture and fitting	250		
Machinery	8,000		
(net profit) →	97,060		
	1,24,950		1,24,950



Balance Sheet  
Abdullah & Sons  
As on 31st Dec. 2017

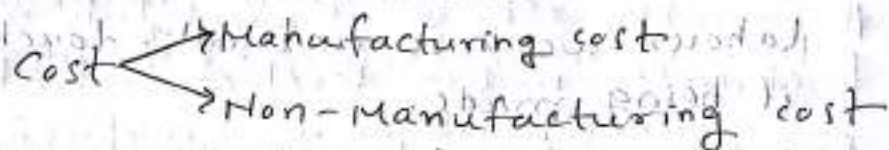
Liabilities	Amount	Assets	Amount
Capital - 71,400		Machine 80,000	
(+) Net profit - 97,060		(-) Depreciation 8,000	72,000
<u>1,68,460</u>			
(-) Drawings - 5000		Furniture & fittings 5,000	
<u>1,63,460</u>		(-) Depreciation 250	4,750
(-) Income tax 900			
<u>1,62,560</u>	1,62,560	Debtors 45,000	
Sundry Creditors 30,000	30,000	(-) Bad debt 1,200	43,800
Outstanding expenses			
Salary - 2,000		(-) Provision for bad debts 2,190	41,610
Wages - 3,000	5,000		
		Bills receivable 13,200	
		Closing stock 60,000	
		Cash & Bank 5,000	
		Advanced expenses:	
		Rent - 600	
		Insurance - 400	1,000
	<u>1,97,560</u>		<u>1,97,560</u>

# Cost Accounting

## Cost:-

Cost is considered as the monetary value of any sacrifice which is given up to receive some benefit.

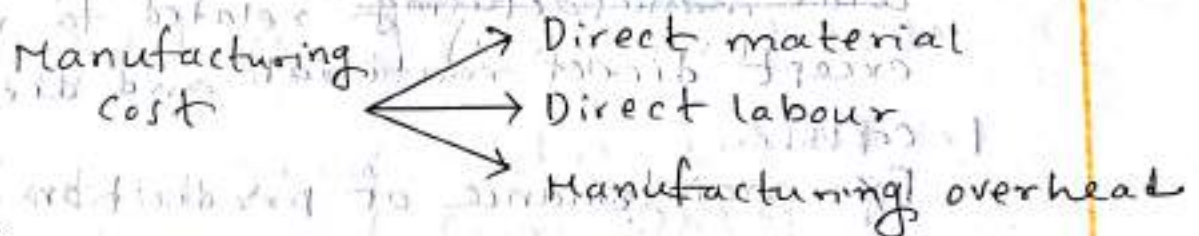
## \*Cost classification according to production purpose / manufacturing purpose:-



### (1) Manufacturing cost:-

Costs that is related with manufacturing of a product

Manufacturing costs are 3 types:-



### (i) Direct material:

Direct material consists of material costs that can be easily traced to individual units of product.

Direct materials are those materials that become an integral part of the finished product and whose costs can be conveniently traced to the finished product. Finished product of one company can become the raw material of another.



For example - the plastic product of Du Pont are a raw material used by HP.

### (ii) Direct labour:-

Direct labour consists of labour costs that can be easily traced to individual units of product. It is sometimes called touch labour, because direct labour workers actually touch the product while it being made.

For example - assembly line workers at Toyota.

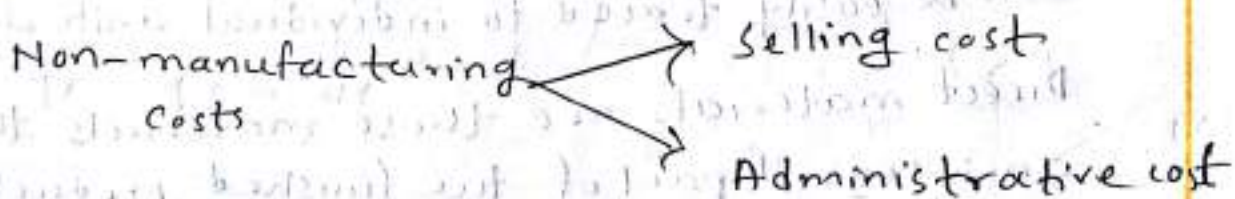
### (iii) Manufacturing overhead:-

It includes all costs ~~associated with the general management of an organization rather than with manufacturing~~ related to manufacturing except direct material and direct labour costs.

Ex - maintenance of production equipment.

### (2) Non-manufacturing costs:-

Costs that are not related to manufacturing process.





(i) Selling cost:

Selling costs include all costs that are incurred to secure customer orders and get the finished product to the customer.

Ex- advertisement, shipping etc.

(ii) Administrative cost:

Administrative costs include all costs associated with the general management of an organization rather than with manufacturing or selling.

Ex- general accounting, public relations etc.

Direct material

Direct labour

Prime cost

(50% + of cost)

Direct labour

+

Manf. overhead

Conversion cost

Direct material

+

Direct labour

+

Manf. overhead

Production cost

Selling expenses

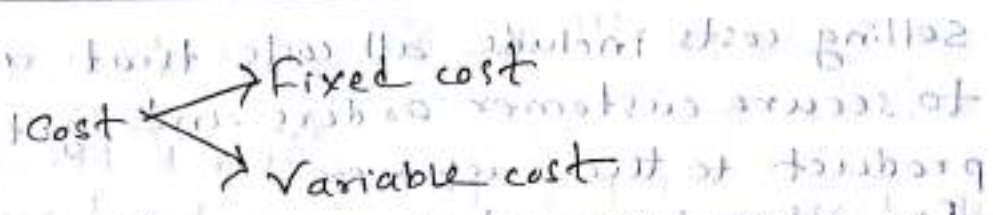
+

Admin. expenses

Period cost



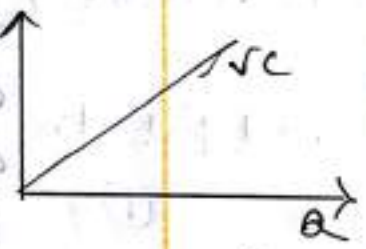
\* On the basis of activity level, cost is of two types:-



(1) Fixed cost:-

A variable cost varies, in total, in direct proportion to changes in the level of activity.

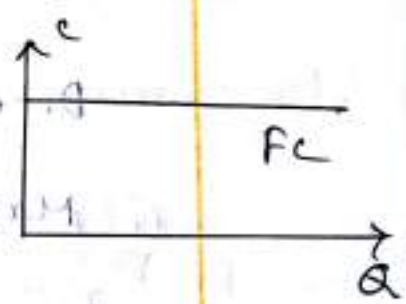
Ex- Commissions, shipping costs etc.



(2) Variable cost:-

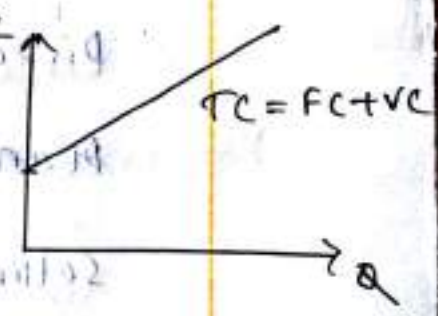
The cost that remains fixed in total (upto a relevant range), regardless the change in the activity level, is considered as fixed cost.

Ex- Building rent, machinery purchase



Total cost:-

$$TC = FC + VC$$



## \* Cost classification according to decision making:-

### (1) Opportunity cost:-

The cost of potential benefit which is given up when one alternative is selected over another is considered as opportunity cost.

Ex- Keep cash in bank or buy land

### (2) Sunk cost:-

The cost that has been incurred in the past and cannot be changed by any decision taken now or in future.

Ex- Bought machine before 10 yrs. Currently its lifetime is almost over.

### (3) Differential cost and revenue:-

The cost of difference between costs of any two alternatives is called as differential cost.

Ex- Company wants to deliver a product. Sell it own by 5,50,000 or by farm 5,00,000

The difference in revenue between any two alternatives is considered as differential revenue.

Ex- If delivered own, rev. is 5 lac; if by farm, rev is 6 lac.



Cost sheet:— when firm produces products, the production costs are shown in a sheet. It is called cost sheet.

XYZ company  
Cost sheet  
For the year ended XX

Direct material:—

Direct material opening inventory	XX
(+) Purchase of direct material	XX
Direct material available to use	XX
(-) Direct material ending inv.	XX
Direct material used in production	XX
(+) Direct labour	XX
Prime cost	XX

(+) MOH:—

Indirect labour	XX
Utilities factory	XX
Rent factory	XX
Dep. factory	XX
Insurance factory	XX
Total MOH	XX
Total Manufacturing cost	XX
(+) WIP opening inventory	XX
(-) WIP ending inventory	XX
Cost of the goods manufactured	XX

XYZ Company  
Income Statement  
For the year ended XX

Sales \_\_\_\_\_ XX  
(-) COGS \_\_\_\_\_ XX

Gross margin \_\_\_\_\_ XX

(-) Administrative and selling:—

Adm \_\_\_\_\_ XX

Selling \_\_\_\_\_ XX

NOI \_\_\_\_\_ XX

⊗ COGM — XX

(+) For open — XX

(-) for close — XX

COGS — XX

⊗ WIP — Work in progress

FG — Finished goods

COGS — Cost of goods sold

COGM — Cost of goods mant.

NOI — Net operating income



Ex- The record of the Alpha company for the following information for the six months ended 13th June, 2017

Particulars	Amount
1. Raw materials used in production	18,000
2. Productive labour	11,000
3. Unproductive factory labour	5,000
4. Factory supplies	900
5. Sales salary	3,000
6. Administrative salary	6,000
7. Other factory expenses	2,600
8. Misc expenses	2,000
9. Sundry admin. exp.	1,500
10. Depreciation (75% mant., 15% admin., 10% selling)	10,000

Goods completed and sold during the period was 5000 units and sales price 16tk/unit.

### Requirements:-

- (1) A statement showing the total cost of good manufactured and profit earned.
- (2) The sales price unit for earning the same percentage of profit from the same volume of production in the next six months if the production cost is increased by 10% and the selling expenses are reduced by 15%.

Alpha Company  
Cost sheet  
For the year ended 31st June, 2017

Raw materials used in production	18,000
(+) Productive labour	11,000
Prime cost	29,000

MOH:-

Unproductive factory labour	5,000
Factory supplies	900
Other factory expenses	2,600
Depreciation	7,500

Total manufacturing cost 16,000

Cost of goods manufactured 45,000

Ans:-

⊗ Manf. units = Sold units.  $\therefore$  FG - Gr Inventory  $\therefore$  1  
 $\therefore$  COGS = Manf. cost.

⊗ Adm. exp. = Adm. sal. + misc. + sundry + dep.  
 $= 6,000 + 2,000 + 1,500 + 1,500$   
 $= 11,000$

⊗ Selling exp. = Sales sal. + dep.  
 $= 3,000 + 1,000 = 4,000$



Alpha Company  
Income statement  
For the year ended 31 June, 2017

Sales (5,000 × 16)	80,000
(-) COGS	45,000
Gross Margin	35,000

(-) Operating expense:-

Adm. expenses	11,000
Selling exp.	4,000
	15,000
Net operating income	20,000

Present profit:-

$$\text{Total cost} = 45,000 + 11,000 + 4,000 \\ = 60,000$$

$$\% \text{ of profit} = \frac{20,000}{60,000} \times 100 \\ = 33.33\%$$

If production cost is increased by 10% and the selling expense is reduced by 15% —

$$\text{Total manufacturing cost} = 45,000 + 45,000 \times \frac{10}{100} \\ = 49,500$$

$$\text{Selling expense} = 4,000 - 4,000 \times \frac{15}{100} \\ = 3,400$$

$$\text{Adm. expense} = 11,000$$

$$\therefore \text{Total cost} = 49,500 + 10,000 + 3,400 \\ = 63,900$$

$$\therefore \text{Profit} = 33.33\% \text{ of } 63,900$$

$$= 63,900 \times \frac{33.33}{100}$$

$$= 21,297.87$$

$$\therefore \text{Sales} = 63,900 + 21,297.87$$

$$= 85,197.87$$

$$\therefore \text{Per unit sales price} = \frac{85,197.87}{5000}$$

$$= 17.04$$

$$\approx 17 \text{ (Ans.)}$$



## CVP Analysis:-

$C = \text{Cost (VC + FC)}$

$V = \text{Volume (quantity)}$

$P = \text{Profit (Sales - VC - FC)}$

### 5 informations for CVP analysis:-

1. Sales price per unit
2. Variable cost per unit
3. Total fixed cost
4. Volume of product
5. Sales mix.

#### Sales mix:-

Product:	A	B	C
Units:	40	50	10
SM =	4:5:1		

### CFS:-

Sales XX

(-) VC XX

CM XX

(-) FC XX

NOI XX

CM = Contribution margin

VC = var. cost

FC = Fixed cost

NOI = Net op. inc.

fx -

Sales (10,000 x 100)	10,00,000
(-) VE (10,000 x 70)	4,00,000
CM	3,00,000
(-) FE	2,00,000
NOI	1,00,000

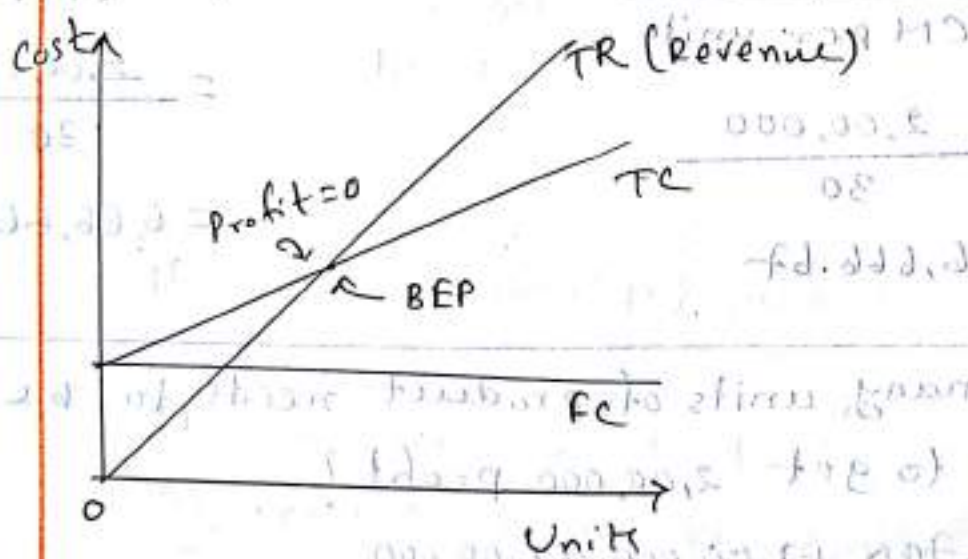
$$\begin{aligned} \text{Var. exp. ratio} &= \frac{\text{Var. exp.}}{\text{Sales}} \\ &= \frac{7,00,000}{10,00,000} \\ &= 0.70 \\ &= 70\% \end{aligned}$$

$$\begin{aligned} \text{CM. ratio} &= \frac{\text{CM}}{\text{Sales}} \\ &= \frac{3,00,000}{10,00,000} \\ &= 0.30 \\ &= 30\% \end{aligned}$$

$$\begin{aligned} \text{CM ratio} &= 100 - \text{var. exp. ratio} \\ &= 100 - 70 \\ &= 30\% \end{aligned}$$

⊗ BEP - Break Even point :-

The point from which profit begins





## Methods for determining BEP:-

### (1) Equation method:-

$$\text{Sales} \times Q = VE \times Q + FC + \text{Profit}$$

Ex-

$$\text{Sales} = 100$$

$$VE = 70$$

$$FC = 2,00,000$$

$$\text{Profit} = 0$$

$$Q = ?$$

$$100 \times Q = 70 \times Q + 2,00,000 + 0$$

$$\therefore Q = 6666.67 \text{ units}$$

$$\text{Revenue} = \text{Sales} \times Q$$

$$= 100 \times 6666.67$$

$$= 6,66,666.67$$

### (2) CM-method:-

$$\text{BEP} = \frac{\text{Fixed exp.}}{\text{CM per unit}}$$

$$= \frac{2,00,000}{30}$$

$$= 6,666.67$$

$$\text{Revenue} = \frac{\text{Fixed exp}}{\text{CM ratio}}$$

$$= \frac{2,00,000}{30}$$

$$= 6,66,666.67$$

Ex- How many units of product needs to be produced to get 2,00,000 profit?

$$100 \times Q = 70Q + 2,00,000 + 2,00,000$$

$$\therefore Q = 13333.33 \text{ units.}$$

⑧ Margine of safety (MOS): —

$$MOS = (\text{Actual or, Present sales} - \text{BEP sales})$$

$$= (10,00,000 - 6,66,666.67)$$

$$= 3,33,333.33$$

$$\% \text{ of MOS} = \frac{3,33,333.33}{10,00,000}$$

$$= 33.33\%$$

⑨ Degree of Operating Level Rage: —

$$DOL = \frac{\text{Contribution Margin}}{\text{Net op. inc.}}$$

$$= \frac{3,00,000}{1,00,000}$$

$$= 3$$

If sales increase 10%, income increases 30%.

It is a measure of how sensitive its NOI is to the percentage change in sales.



Ex- (1) Sales increase 21%, NOI = ? Ans: 1,60,000

(2) Sales increase 21%, FC increase 20,000, NOI = ?

$$\text{NOI} = (\text{Actual Sales} - \text{Variable Costs}) - \text{Fixed Costs}$$

$$= (4,00,000 - 2,40,000) - 10,000$$

$$= 1,60,000$$

$$\text{NOI} = \frac{3,33,333.33}{10,000} = 33.3333$$

$$= 33.33\%$$

② Degree of Operating Leverage -

$$\text{DOL} = \frac{\text{Contribution Margin}}{\text{Net op. inc.}}$$

$$= \frac{3,00,000}{1,00,000} = 3$$

$$= 3$$

If sales increase by 10%, then increase in NOI is

It is a measure of how sensitive the NOI is to the percentage change in sales.

Exercise of Trading account

Problem-1:

The following particulars have been extracted for the books of R. Rahman for the year ended 31st December, 1990;

	Rs.
Sales	99,330
Sales returns	530
Purchases	44,390
Purchase return	710
Stock (1st Jan., 1990) at cost price	7,540
Stock (31st Dec., 1990) " " "	8,920
Freight and duty	15,700
Carriage inward	3,300
Wages	7,860

Prepare R. Rahman's Trading account for the year ended 31st Dec., 1990

Soln:-

Trading Account  
R. Rahman  
for the year ended 31 Dec. 1990

Particulars	Amount	Particulars	Amount
Opening stock	7,540	Sales	99,330
Purchase	44,390	(-) return	530
(-) return	710		98,800
	43,680	closing stock	8,920
Wages	7,860		
Freight and duty	15,700		
Carriage inward	3,300		
Gross profit	29,640		
	1,07,720		1,07,720



Problem-2:-

During 1989, 1990, 1991 a trader made a uniform gross profit of 25% on cost (i.e., 20% on sales)

Stock on 1.1.92	16,000
Purchases	98,000
Sales	1,15,000
Carriage inward	2,000
x Carriage outward	1,700
x Trade expenses	300

Prepare Trading Account from 1.1.92 to 25.7.92.

Trading Account  
X-company

For the period from 1 Jan., 1992 to 25 Jul., 1992

Particulars	Amount	Particulars	Amount
Opening stock	16,000	Sales	1,15,000
Purchase	98,000	Closing stock	24,000
Carriage in.	2,000		
Gross profit: 20% on sales	23,000		
	1,39,000		1,39,000

Problem 5:-

Prepare trading and profit & loss account for the year ended 31st Dec, 1993 from the following details:-

Purchases	1,50,000
Sales	2,70,000
Returns Inward	30,000
Returns Outward	20,000
Wages	25,000
Salaries	15,000
Carriage Inward	3,000
Carriage outward	2,000
Duty and clearing charges	500
Factory rent	2,500
Office rent	1,500
Fuel and power	11,000
Traveling and conveyance	1,950
Rent, Rates and Taxes	2,450
Interest received	540
Discount allowed	600
Discount received	460
Insurance charges	500
Bad debts	650
Trade expenses	200
Advertisement	400
Depreciation:	
on plant	1250
on furniture	300
Stock on 1.1.93	37,000
Stock on 31.12.93	55,000



Soln:-

# Trading Account

X-company

for the year ended 31st Dec., 1993

Particulars	Amount	Particulars	Amount
Opening stock	37,000	Sales	2,40,000
Purchases	1,50,000	(-) Return In.	30,000
(-) Return out.	20,000		2,40,000
	1,30,000	Closing stock	55,000
Wages	25,000		
Carriage in.	3,000		
Duty and clearing.	500		
Factory rent	2,500		
Fuel and power	1,000		
Gross profit	96,000		
	2,95,000		2,95,000

# Profit & Loss Account

X-company

for the year ended 31st Dec, 1993

Page 12

Particulars	Amount	Particulars	Amount
Discount allowed	18,600	Gross profit	96,000
Salaries	15,000	Interest received	540
Rent, rates, & taxes	2,450	Discount received	460
Office rent	1,500		
Insurance	500		
Carriage outward	2,000		
Bad debts	650		
Traveling and con.	950		
Trade expenses	200		
Advertisement	900		
<u>Depreciation:</u>			
Plant	1,250		
Furniture	300		
	1,550		
Net profit	70,700		
	97,000		97,000



### Problem 10:

Opening stock	2,400
Sales	86,980
Purchases	55,230
Carriage inward	1,250
wages and salaries	8,700
Advertising	4,680
Rates and insurance	1,950
Electricity	870
Sundry office expenses	420
Debtors	6,580
Creditors	2,160
Cash in hand and balance in bank	560
Drawings	10,400
Discounts allowed	560

(1) stock at 31st Dec., 1992 valued, 4,560

(2) Depreciation:

Building 5%

Furniture and fitting 20%

(3) Wages and salaries 450 were outstanding

(4) Rates prepaid - 300

(5) Provision for doubtful debts is to be made 5% Sundry deb.

Furniture and fitting	2,540
Building	12,000
Capital	30,000
Goodwill	11,000

Soln:-

### Trading Account

x-company

for the year ended 31st Dec, 1992

[illegible]



Profit & Loss Account  
X-company

for the year ended 31st Dec, 1992

Particulars	Amount	Particulars	Amount
Discount allowed —	560	Gross profit —	32,660
Wages and salaries —	8,700		
(+) Outstand. — 450	9,150		
Rates and insur. — 1,950			
(-) Prepaid — 300	1,650		
Electricity —	870		
Provision for doubtful debts (5% on 6,580) —	329		
Advertising —	4,680		
Sundry office. —	420		
<u>Depreciation:</u>			
Buildings — 600			
Furnitures — 508	1,108		
Net profit —	13,893		
	32,660		32,660