

Assets = Liabilities + Owner's Equity . . . . (1)

\*  $A = L + OE$  ← Basic Accounting Equation

- Profit হত বাড়ে, Owner's Equity তত বাড়ে ।

- Revenue হত বাড়ে, profit তত বাড়ে ।

- Expense হত বাড়ে, owner's Equity তত ঘুচে ।

### Economic Event / Transaction

It is an event which has dual impact on equation

(1) ( $A=L+OE$ ) and makes both sides equal of it.

### Steps of Accounting Cycle

- 1) Preparation of Journal
- 2) Preparation of Ledger
- 3) Preparation of Trial Balance
- 4) Preparation of Financial Statement
- 5) Preparation of financial Statement's Analysis .

Principles  
Assumptions  
Constraints / Limitations } These topics are needed  
for recording Any  
Economic Event

## ■ Principles

- 1) Historical Cost principles (HCP)
- 2) Revenue Recognition Principles (RRP)
- 3) Matching Principles (MP)
- 4) Full disclosure Principles (FDP)

- HCP : In here , to record asset of any economic event Book value is counted for calculation , not the market value.

Book Value = Purchase Value (Unchanged)  
Market Value (Changeable)

- RRP : According to this principle, revenues are recognized when they are realized or realizable and are earned, no matter when cash is received.

- Matching Principle : আয় হলে ব্যয় হবে, ব্যয় থাল আয় হবে।  
যখন আয় ও ব্যয় প্রক্রিয়া দ্বারা একই সময়ে হয় তখন Matching principle কাজ করে। Expenses should be recorded during the period in which they are incurred.

- FDP : যখন অকল Material Information\* উপস্থৃতান  
হো হবে বা disclose করা হবে।

\* Material Information : যে অকল Info প্রক্রিয়া Decision Makers এর Decision change এর ক্ষমতা বাধে।

## # Assumptions

- 1) Economic or separate entity Assumption (EEA)
- 2) Monitorry value assumption (MVA)
- 3) ~~Growing concern~~ Going concern assumption (GCA)  
Going
- 4) Periodicity Assumption (PA)  
Periodicity

1) EEA: একটি প্রতিষ্ঠানের একটি নিয়ম আবশ্যিক  
অঙ্গ আছে, এটি হিসেবে তাঙ্গা হয়।

2) MVA: হিসেবে নেই এ কিছু সব্যস্তি প্রতিষ্ঠানের  
Monitorry Value আছে এ গুডউইল আছে,  
এবং এই গুডউইল কে money দিয়ে Evaluate  
হয়।

3) GCA: হিসেবে নিয়ো, Organization will be  
continuous, কাজের প্রক্রিয়া হবে না।

4) PA: একটি প্রতিষ্ঠানের কাজের নির্দিষ্ট Period  
or Time Segment ও মাপদণ্ড Info Record  
করালে এই Assumption কে PA বলে।

## # Limitations

- 1) Cost Benefit Relationship (CBR)
- 2) Materiality
- 3) Conservatism
- 4) Industrial Practice

- CBR : যেখানে শ্রীরে নেক্ষা হয় cost will be less than benefit As accounting is profit oriented.

- Materiality : যেহেতু Material identify করার প্রয়োজন Specific criteria মেরি ।

- Conservatism : যেহেতু Asset কে বাসিয়ে দেখলা যাবেনা & Liability কে কমিয়ে দেখানা যাবেনা যেহেতু প্রতি perfectly Respresentative না ।

- Industrial Practice : যেহেতু Accounting In for business factory -

- Manufacturing factory
- Mercendice factory (works as Middle Man)
- Service factory \*এদের Activity different from each other  
এদের নির্দেশক মতো Comparable বিষ্টু একে অপরাধের  
মাঝে Incomparable which is a limitation :-

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3/A  
12.02.18

Accounting

Owner's Equity = Capital + profit

-Fixed Asset → যেসুলাকে সংস্থাপনি গ্রহণ করা যাবানা,  
Cash এ convert করতে হয়।

Debtors - দেবাদাতা (Assess কোড ঘায়ে যদি Debtors বাড়ে)

Account Receivables

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3/D  
17.02.18

# Accounting Information Record করার জন্য Journal টৈফি  
করা লাগবে।

1. Journal Book (জার্নেল)

# Rules for Journal

1) Personal Account - মান শৃঙ্খল সহ প্রতিটি Related Transaction

যে মুক্তি আস করে তখ Debit (Dr)

যে মুক্তি আস করে তখ Credit (Cr)

2) Real/Asset Account - সম্পদ ক্ষেত্রে Related Account

Asset increase করল Debit (Dr)

Asset Decrease করল Credit (Cr)

3) Nominal Account - আয়-ব্যয় বৃত্তিক অ্যাকাউন্ট

1) Revenue increase বৃদ্ধি করলে credit  
decrease করলে debit

2) Expenses increase করলে debit  
decrease করলে credit

4) Liabilities বাস্তবে Credit (Cr)

Liabilities ক্ষমতার মধ্যে Debit (Dr)

\* for any period (for the period ended xth Month)

### #How to Prepare Journal Book

Journal Book

"X" ← Name of the company

for the month of Feb. 2018 \*

| Date       | Particulars   | Ref  | Dr          | Cr          |
|------------|---|--|-------------|-------------|
| 01.02.2018 | Cash A/C Dr<br>Capital A/C Cr (American Style)<br>অর্থাৎ, To Capital A/C (British Style)<br>(as the owner invested cash Tk. 5 lakhs as capital) | memo number<br>mean-while<br>if will be blank) | 500000<br>— | —<br>500000 |
| 02.02.2018 | Cash A/C Dr<br>Sales A/C Cr   |  | 500000<br>— | —<br>500000 |
| 03.02.2018 | Cash A/C Dr<br>Bank loan A/c Cr   |  | 500000<br>— | —<br>500000 |

|            |  |                       |                  |
|------------|--|-----------------------|------------------|
| 04.02.2018 | Cash A/c Dr<br>"X" loan A/c Cr                           | 500000<br>—           | —<br>500000      |
| 05.02.2018 | Cash A/c Dr<br>Office equipment A/c Dr<br>Capital A/c Cr | 500000<br>200000<br>— | —<br>—<br>700000 |
|            |  | মোট পরিমাণ            | মোট পরিমাণ       |

Journal Book

| Date       | Particulars   | Ref. | Dr                               | Cr                      |
|------------|---|------|----------------------------------|-------------------------|
| 16.02.2018 | purchase A/c Dr<br>To cash A/c  |      | 100000                           | 100000                  |
| 20.02.2018 | purchase A/c Dr<br>to Account payable A/c<br>or, name of the<br>money Robin               |      | 100000                           | 100000                  |
| 23.02.2018 | Mr. Robin A/c Dr<br>To cash A/c   |      | 100000                           | 100000                  |
| 29.02.2018 | Mr. Robin A/C Dr<br>To cash A/c<br>To discount received<br>A/c                            |      | 100000                           | 95000<br>5000           |
| 26.02.2018 | Cash A/C Dr<br>To sales A/c<br>Karim & Sons<br>Cash A/c Dr<br>cash A/c<br>To Karim & Sons |      | 50000<br>50000<br>50000<br>50000 | 50000<br>50000<br>50000 |
|            | Cash A/C Dr<br>To Karim & Sons A/c  |      | 50000                            | 50000                   |

Depreciation - অবচয়

Asset  $\Rightarrow$  value যদি নির্দিষ্ট সময় পর্যামুখ করতে থাকে।

Expense হিসাবে Record করা হয়।

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5/D

04.03.18

## Ledger Account

(બજિયાન હિસાਬ)

### Cash Ledger

| Date     | Explanation       | Ref. | Dr     | Cr    | Balance |
|----------|-------------------|------|--------|-------|---------|
| 01.02.18 | To Capital A/c    | —    | 500000 | —     | 500000  |
| 02.02.18 | To sales A/c      | —    | 50000  | —     | 550000  |
| 03.02.18 | To Bank loan A/c  | —    | 500000 | —     | 1050000 |
| 04.02.18 | To Mr. X loan A/c | —    | 500000 | —     | 1550000 |
| 05.02.18 | By Salary A/c     | —    | —      | 30000 | 1520000 |

### Sales Ledger

| Date     | Exp.        | Ref. | Dr | Cr    | Balance |
|----------|-------------|------|----|-------|---------|
| 06.02.18 | By Cash A/c | —    | —  | 50000 | 50000   |

### Discount Ledger

| Date     | Exp.                | Ref | Dr | Cr   | Balance |
|----------|---------------------|-----|----|------|---------|
| 07.02.18 | To Karim & Sons A/c | —   | —  | 5000 | 5000    |

Homework : 1) Cash Ledger, 3) Purchase Ledger,  
 2) Capital Ledger 4) Sales Ledger,  
 5) Bank Ledger.

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Accounting

T/D  
27.03.18

Trial Balance  
(ବ୍ୟକ୍ତିଗତ)

Lf = ledger  
Folio

| Particulars/Account | Lf | Dr | Cr  |
|---------------------|----|----|-----|
| Purchase            | —  | xx | xx  |
| Salary              | —  | —  | —   |
| Cash/Bank           | —  | xx | —   |
| Debtors             | —  | xx | —   |
| Creditors           | —  | —  | xx. |
| Opening Stock       | —  | xx | —   |
| Bad debts           | —  | xx | xx  |

Debtors - ଦାତାର (Asset) Total

Creditors - ପାଇନାଦାର (Liability)

Bad debts - ଅନାଦାୟୀ ଦେଲା (ଯେ କୋଣର ଟାକାର  
ଫିକ୍ଟୁ ଅଂଶ Return  
ପାଇୟା ଥାଏନାହା) (Expense)

Provision for Bd. - ଅନାଦାୟୀ ଦେଲା ଏକାନ୍ତିକ  
(Owner's Equity)

## # Financial Statement

- Trading Account (অয়-বিক্রয় হিসাব)
- Profit and Loss Account (লাভ-প্রতি হিসাব)
- Balance sheet (ইকোনোমিক বিপুত্তি)

## Merchantize

- income statement
- Cash flow statement
- Owner's equity statement
- Balance sheet

Cost 2 types -

- Product cost
- Period cost

## Rahim and Son's

## Balance Sheet

As on 31st Dec 2017

| L + OE              | Amount     | Assets                    | Amount |
|---------------------|------------|---------------------------|--------|
| Capital - XX        |            | Buildings - XX            |        |
| (+) Net profit - XX |            | (-) Dep. - XX             | XX     |
| <u>XX</u>           |            | Land                      | XX     |
| (-) Withdrawn - XX  | <u>XX</u>  | Machinaries - XX          |        |
| <u>XX</u>           |            | (-) Dep. - XX             | XX     |
| (-) Income Tax - XX |            | Furniture - XX            |        |
| Creditors           | XX         | (-) Dep. - XX             | XX     |
| Bank Loan           | XX         | Debtors - XX              |        |
| Account payable     | XX         | (-) Bad Debt. - XX        |        |
| <u>Unpaid exp.</u>  |            | <u>XX</u>                 |        |
| Salary - XX         |            | (-) Provision for BD - XX | XX     |
| wages - XX          |            | Closing Stock - XX        | XX     |
| rent - XX           | <u>XXX</u> | Account Receivers - XX    | XX     |
|                     |            | Cash and Bank - XX        | XX     |
|                     |            | <u>Advance exp</u>        |        |
| Salary - XX         |            | Salary - XX               |        |
| rent - XX           |            | rent - XX                 |        |
| Insurance - XX      |            | Insurance - XX            |        |
|                     |            |                           | XX     |

Rahim & Sons

Profit & Loss Account

For the year ended 31st Dec, 2017

| Particulars           | Amount | Particulars         | Amount |
|-----------------------|--------|---------------------|--------|
| Interest paid         | xx     | Gross Profit        | xx     |
| Discount Allowed      | xx     | Interest received   | xx     |
| Commission Paid       | xx     | Discount received   | xx     |
| Carriage outward      | xx     | Commission received | xx     |
| Carriage inward       | xx     |                     |        |
| Salary                | xx     |                     |        |
| (F) Advance           | xx     |                     |        |
| Rent                  | xx     |                     |        |
| (F) Advance/unpaid    | xx     |                     |        |
| Bad Debt.             | xx     |                     |        |
| (+) Provision for BD  | xx     |                     |        |
| <u>Depreciation :</u> |        |                     |        |
| Furniture             | xx     |                     |        |
| Building              | xx     |                     |        |
| Machineries           | xx     |                     |        |
| Net profit            | xx     |                     | xxx    |
|                       |        |                     |        |
|                       |        |                     |        |
|                       |        |                     |        |

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03.03.18

# Prepare trading and profit and loss account and balance sheet of Rahim and Sons' as at 31st Dec. 2017 from the following trial Balance and additional information.

| Particulars            | Lf   | Dr     | Cr     |
|------------------------|------|--------|--------|
| Opening stock          |      | 50000  |        |
| purchases              |      | 125000 |        |
| Bills receivables      |      | 13200  |        |
| Sales                  |      |        | 260000 |
| Sales return           | 2000 |        |        |
| purchase return        |      |        | 12000  |
| Discount               | 300  |        | 250    |
| Carriage Outwards      |      | 500    |        |
| salary                 |      | 10000  |        |
| Insurance              |      | 1200   |        |
| Rent                   |      | 3000   |        |
| sundry Debtors         |      | 45000  |        |
| Sundry Creditors       |      |        | 30,000 |
| Income Tax             | 900  |        |        |
| Cash and Bank          |      | 5000   |        |
| Furniture and fittings |      | 5000   |        |

| Particulars                       | LF   | Dr    | Cr    |
|-----------------------------------|------|-------|-------|
| Bad debts                         |      | 2000  |       |
| Plant and machinaries<br>and duty |      | 80000 |       |
| wages                             |      | 1500  |       |
| provislo for bad debt             |      | 15000 |       |
| Capital                           |      |       | 1750  |
| Drawings                          | 5000 |       | 71400 |

#### \*Additional Informations

1. Closing stock on 31st Dec 2017 was valued TK 16000
2. The provision for bad debt is to be maintained at 5% on sundry debtors.
3. Total Bad debts to be written off during the year were TK 3000.
4. Outstanding Liabilities
  - a) Salaries Tk 2000
  - b) wages Tk 3000

5. Rent and Insurance paid during the year  
where for 15 and 18 months respectively.

## 6. Depreciate

a) Furniture and fittings by 5%.

b) Plant and machinaries by 10%.

### Trading Account

Rahim & Sons

For the year ended 31st Dec 2017

| Particulars          | Amount | Particulars   | Amount |
|----------------------|--------|---------------|--------|
| opening stock        | 50000  | Sales -       | 260000 |
| purchases 125000     |        | (-) Return -  | 2000   |
| (-) return 1200      | 123800 | closing stock | 258000 |
| wages 15000          |        |               | 60000  |
| (+) outstanding 3000 | 18000  |               |        |
|                      |        |               |        |
| freight and duty     | 1500   |               |        |
|                      | 124700 |               |        |
| Gross profit         | 163700 |               |        |
|                      |        |               |        |
|                      | 319000 |               | 318000 |

## # Profit &amp; Loss Account

Rahim &amp; Sons

For the year ended 31st Dec 2017

| Particulars                  | Amount | Particulars         | Amount |
|------------------------------|--------|---------------------|--------|
| Discount Allowed             | 300    | Gross Profit →      | 124700 |
| Carriage Outwards            | 2500   | Discount received → | 250    |
| Salary 10000                 |        |                     |        |
| (+) Outstanding 2000         | 12000  |                     |        |
| Rent 3000                    |        |                     |        |
| (-) Advance 600              | 2400   |                     |        |
| Insurance 1200               |        |                     |        |
| (-) Advance 400              | 800    |                     |        |
| Bad debts 3200               |        |                     |        |
| (+) Provision 2190           | 2      |                     |        |
| for BD 5390                  |        |                     |        |
| (-) Existing provision 1750  | 3640   |                     |        |
| Depreciation:                |        |                     |        |
| Furniture & fittings - 250   |        |                     |        |
| Plant and machineries - 8000 | 8250   |                     |        |
| machineries Net profit       | 97060  |                     |        |
|                              | 124950 |                     | 124950 |

# Balance Sheet

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Rahim & Sons

As on 31st Dec., 2017

| LT OE                  | Amount        | A                           | Amount        |
|------------------------|---------------|-----------------------------|---------------|
| Capital - 71400        |               | Machinaries - 80000         |               |
| (+) Net profit - 97060 |               | (-) Dep. 8000               |               |
| <u>168460</u>          |               |                             |               |
| (-) Drawings 5000      |               | Furniture & fittings - 5000 | 72000         |
| <u>163460</u>          |               | Dep. - 250                  |               |
| (-) Income Tax 900     |               |                             |               |
| <u>162560</u>          |               | Debtors 45000               | 4750          |
| Creditors 30000        |               | (-) Bad debt 1200           |               |
| Outstanding Exp.       |               |                             |               |
| Salary - 2000          |               | 43800                       |               |
| Wages - 3000           | 5000          | 2190                        |               |
|                        | <u>107560</u> |                             |               |
|                        |               | Bills receivables 13200     |               |
|                        |               | Closing Stock 60000         |               |
|                        |               | Cash and Bank 5000          |               |
|                        |               | <u>Advance Exp.</u>         |               |
|                        |               | Rent 600                    |               |
|                        |               | Insurance 400               |               |
|                        |               | <u>1000</u>                 |               |
|                        | <u>197560</u> |                             | <u>197560</u> |

# Cost is considered as the monitory value of any sacrifice which is given up to receive some benefits.

$$\text{price} = \text{cost} + \text{profit}$$

# Production purpose of cost ~~is~~ is cost :-

- 1) Manufacturing cost (product cost)
- 2) Non-manufacturing cost (Period cost)

# Manufacturing cost are 3 types:-

- Direct Material
- Direct Labour
- Manufacturing overhead

# Non-manufacturing cost are two types:-

- Administrative cost
- selling cost

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

- Sunk cost: The cost that has been ~~written~~ <sup>occurred</sup> in the past and cannot be changed by any decision taken now or in future.

- Differential cost & Revenue: The cost of difference between any two alternatives is called the differential cost.

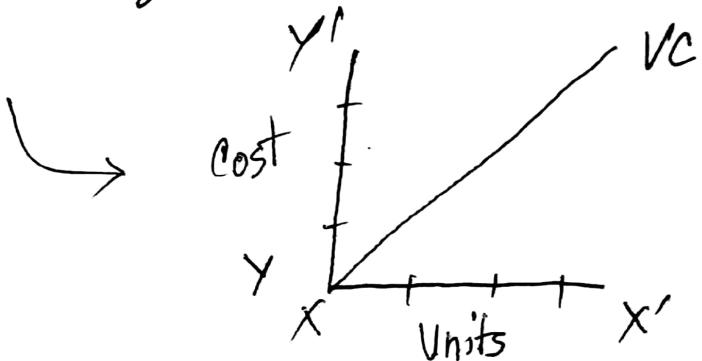
The difference in revenue between any two alternatives is considered as the differential revenue

\* On the basis of activity level cost are two types:

- 1) Variable cost,
- 2) fixed cost

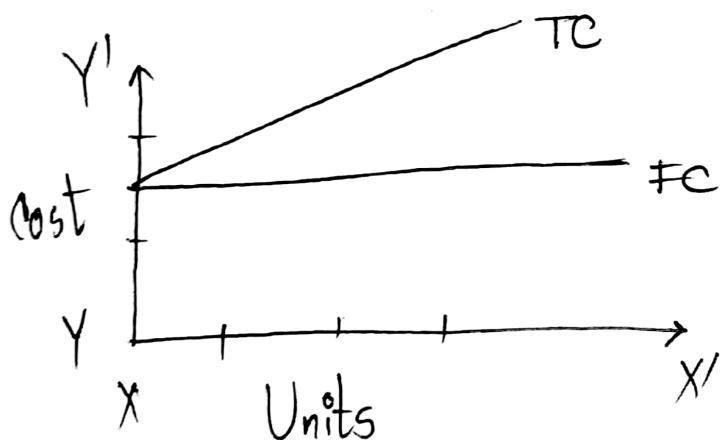
### - Variable Cost :

The cost that varies in total in direct proportion to the change in the level of activity is considered as variable cost.



### - Fixed Cost :

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



$$TC = VC + FC$$

# Cost sheet

WIP = Work in process

"XYZ" company

cost sheet

for the year ended 31st Dec 2017

## Direct Material:

D. material opening Inventory → XX

(+) purchases of Direct material → XX

D. Material available for use → XX

→ D. material Ending inventory → XX

D. material used in production → XX

(+) Direct labor → XX

prime cost → XX

## (+) MOH

Indirect labor — XX

Utilities Factory — XX

Rent Factory — XX

Dep. factory — XX

Insurance Factory — XX

(+) Total MOH → XX

Total Manufacturing cost → XX

(+) WIP opening inventory → XX  
XX

(-) WIP Ending Inventory → XX

Cost of goods manufactured → XX

"XYZ" company  
Income Statement

for the year ended 31st Dec. 2017

Sales → XX

COGM → XX

(-) Cost of Good sold → XX

(+) FG opening → XX

Gross margin → XX

(-) FG ending → XX

COGS → XX

Administrative & selling

Adm. → XX

Selling → XX

Net operating Income → XX

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Accounting

12/D  
27.06.18

Show

# The record of the alpha company for the following info. for the six months · 30th June, 2017.

| Particulars  | Amount                |
|--|-----------------------|
| Raws materials used in production                                      | 18000                 |
| productive labour  | 11000                 |
| unproductive factory labour  | 5000                  |
| factory supplies   | 900                   |
| <del>Sales</del> Salary  | 3000                  |
| Administrative salary  | 6000                  |
| Other factory Expenses   | <del>20100</del> 2600 |
| Misc. Expenses   | 2000                  |
| Sundry Admin Expenses  | 1500                  |
| Depreciation (75% manufacturing<br>15% Administrative, 10%<br>Selling) | 10000                 |

## Additional Info.

1) Goods completed and sold during the period was 5000 units, and sells price was TK 60/-.

## Requirement

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

Answer:

Cost Sheet

1 Raw materials used in production → 18000

(+) Productive labor → 11000

Prime Cost → 29000

(+) Manufacturing Overhead

U. factory labor → 5000

Factory Supplies → 900

Other F. Expenses → 2600

Dep. (75%) → 7500

Cost of the goods manufactured 16000  
↳ 45000

Sales (5000 × 16) → 80000

(-) Cost of Goods sold → 45000

Gross Margin → 35000

(-) Operating Expenses

Administrative Expenses → 11000

Selling Expenses → 4000

15000

Net Operating Income → 200000

$$\% \text{ of profit} = \frac{20000}{60000} \times 100\% \\ = 33.33\%$$

$$\begin{array}{r} \text{Total cost} \\ \hline 45000 \\ 11000 \\ 4000 \\ \hline 60000 \end{array}$$

2

### # Total Manufacturing Cost

$$45000 + 10\% 45000$$

$$\Rightarrow 45000 + 4500$$

$$\Rightarrow 49500$$

### # Selling Expenses

$$4000 - 15\% 4000$$

$$\Rightarrow 4000 - 600$$

$$\Rightarrow 3400$$

### # Administrative Cost Expenses

11000 (No change)

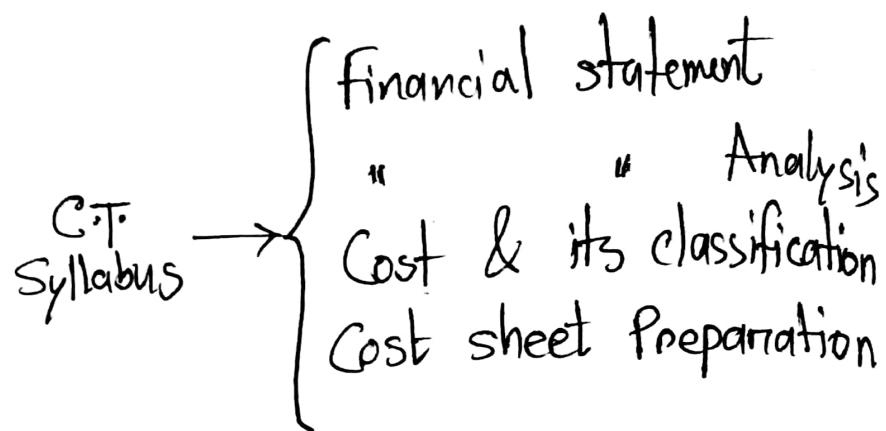
# Total Cost  $\rightarrow 11000 + 49500 + 3400$

$\hookrightarrow 63900$

$$\# \text{ profit} = 33.33\% \text{ of } 63900 \\ = 21297.87$$

$$\# \text{ Sales} = 63900 + 21297.87 \\ = 85197.87$$

$$\text{per Unit } 85197.87 \\ \text{Sales price} = \frac{85197.87}{5000} = 17.04 \approx 17 \text{ TK}$$

# C.V.P. Analysis

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

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

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

$$\left| \begin{array}{l} VC = \text{Variable Cost} \\ FC = \text{Fixed Cost} \end{array} \right.$$

- 1) Sales price per unit
- 2) Variable cost per unit
- 3) Total Fixed Cost
- 4) Quantity of product  
Volume

5) Sales mix : A company produces A, B, C products

$$A = 4000, B = 8000, C = 2000$$

$$\text{Sales mix} = 2 : 4 : 1$$

$$\begin{aligned}
 \text{Sales} &\rightarrow XX \\
 (-) \text{VE} &\rightarrow \underline{XX} \\
 \text{CM} &\rightarrow \underline{XX} \\
 (-) \text{FE} &\rightarrow \underline{XX} \\
 \text{NOI} &\rightarrow \underline{\underline{XX}} \\
 \text{CFIS} & \\
 \text{NET OPERATING INCOME} &
 \end{aligned}$$

$$\begin{aligned}
 \text{Sales } (10000 \times 100) &\rightarrow 1000000 \\
 \text{VE } (10000 \times 70) &\rightarrow 700000 \\
 \text{CM} &\rightarrow \underline{300000} \\
 (-) \text{FE} &\rightarrow \underline{200000} \\
 \text{NOI} &\rightarrow \underline{100000}
 \end{aligned}$$

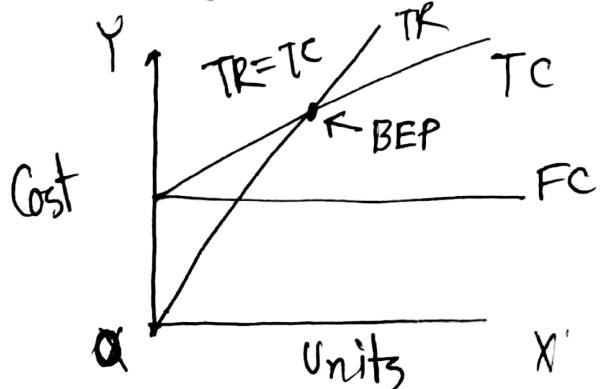
$\therefore \text{Variable expense Ratio} = \frac{\text{Variable expenses (VE)}}{\text{Sales}}$

$$\begin{aligned}
 &= \frac{700000}{1000000} \\
 &= 0.7 = 70\%
 \end{aligned}$$

$\therefore \text{Contribution Margin Ratio} = \frac{\text{Contribution margin (CM)}}{\text{Sales}}$

$$\begin{aligned}
 &= \frac{300000}{1000000} \\
 &= 0.30 \\
 &= 30\%.
 \end{aligned}$$

## # BEP (Break Even Point)



TR = Total Revenue

TC = Total Cost

FC = Fixed Cost

$\therefore \underline{\text{BEP}}$

$$\text{Sales} \times Q = \text{VE} \times Q + \text{FC} + \text{Profit}(0)$$

$$\Rightarrow 100Q = 70Q + 200000 + 0$$

$$\Rightarrow 100Q - 70Q = 200000$$

$$\Rightarrow Q = \frac{200000}{30} = 6666.67 \text{ Units}$$

$$\text{Revenue} = 100Q = 6666.67 \times 100 = 666667$$

# CM Method :

$$\begin{aligned} \text{BEP} &= \frac{\text{Fixed Expenses}}{\text{CM Per Unit}} \\ &= \frac{200000}{30} = 6666.67 \end{aligned}$$

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

$$100Q = 70Q + 200000 + 200000$$

$$\therefore Q = 13333.33$$

### # Margin of Safety:

$$\therefore \text{MOS} = \frac{\text{Actual Sales} - \text{BEP Sales}}{\text{Present sales}} \\ = (1000000 - 666666.67) \\ = 333333.33$$

$$\therefore \% \text{ of MOS} = \frac{333333.33}{1000000} \times 100 = 33.33\%$$

### # DEGREE OF OPERATING LEVERAGE:

$$DOL = \frac{\text{Contribution Margin (CM)}}{\text{Net Operating Income (NOI)}}$$

It is a measure of how sensitive its net operating income is to the percentage changes in sales.

$$\therefore DOL = \frac{300000}{1000000} = 3$$