

Marginal Costing

Marginal Cost:

It is the amount at any given volume of output by which, aggregate costs are changed, if the volume of out put is increased or decreased by one unit.

Meaning of Marginal Costing:

Marginal costing is based on the distinction between fixed cost and variable cost. Only variable cost are applied to products. All fixed cost are written off to the profit and loss account. Even the semi-variable costs are for this purpose segregated into fixed and variable components.

It makes a basic assumption that excess of selling price over variable cost provides a fund to meet firstly the fixed costs and then to provide company's profit.

Definition of Marginal costing:

The ICMA, London, had defined, "Marginal costing as the ascertainment of marginal cost and of the effect on profit of changes in volume or type of out put by difference between fixed cost and variable cost".

Meaning of Fixed Cost, Variable Cost and Semi-variable Cost:

Fixed Cost:

A fixed cost is one which remains unchanged in total amount over a wide range of production level eg building rent, Permanent staff salaries etc.

Fixed cost per unit will vary with a change in the volume of output.

Variable Cost:

Variable cost per unit remains constant while the total amount of variable cost changes in direct proportion to changes, in the level of production eg: Raw materials consumed.

Semi Variable Cost:

Cost are not necessarily either fixed or variable. Some costs increase with the increase in the volume of production but not in the same proportion eg: Supervisory salaries.

Marginal Cost Equation:

The following equation is known as basic marginal cost equation

1. If profit $\text{Sales} - \text{Variable Cost} = \text{Fixed Cost} + \text{Profit}$
2. If Loss $\text{Sales} - \text{Variable Cost} = \text{Fixed Cost} - \text{Loss}$
3. $\text{Contribution} = \text{Fixed Cost} + \text{Profit}$
4. $\text{Contribution} = \text{Fixed Cost} - \text{Loss}$
5. $\text{Sales} - \text{Variable Cost} = \text{Contribution}$

1. Find out contribution form the following information

Variable Cost 35,000, sales Rs. 60,000, and Fixed Cost Rs. 20,000

Cost Volume Profit Analysis:

Cost Volume profit analysis is an extension of the principles of marginal costing. It studies the inter-relationship of three basic factors of business operations:

- a. Cost of production
- b. Volume of production or sales and
- c. Profit

An understanding of CVP analysis is extremely useful to the management in budgeting and profit planning, it Explains the impact of the following on the net profit:

- A Changes in selling prices
- B Changes in volume of Sales.
- C. Changes in variable cost and
- D. Changes in fixed Cost.

Profit Volume Ratio (P/V Ratio):

Profit volume ratio is established in the relationship between contribution and sales. It is another method used to calculate the cost volume profit relationship which is known as P/V ratio. It helps for studying the profitability of operations of a business.

2. Sales Rs. 8,00,000, Variable Cost Rs. 3,00,000, Fixed Cost Rs. 2,00,000. Calculate PV ratio.

Break Even Point:

Profit volume ratio is established in the relationship between contribution and sales. It is another method used to calculate the cost volume profit relationship which is known as P/V ratio. It helps for studying the profitability of operations of a business.

Break Even Chart:

It is the simplest method of depicting the relationship between cost volume and profit. It is a chart which clearly shows the break even point of the business. A break even chart is presentation of cost and revenue data on a graph.

Margin of Safety:

Margin of safety represents the amount by which volume of sales exceeds the break down point and the actual output represents the margin of safety.

Formula

Margin of Safety = Total sales – Sales at BEP

Margin of Safety

- Higher margin of safety better for business because it indicates that even if there is some fall in the sales, still the firm will earn profit.
- A low margin of safety represents a difficulty business position.

Margin of safety can improve by taking one or more of the following steps:

- Increasing the selling price
- Changing the product mix
- Reducing Fixed cost
- Increasing the production
- Reducing the variable cost

3. Fixed cost Rs. 1,50,000

Profit Rs. 90,000

Sales Rs. 5,00,000

Calculate margin of safety

15 Marks Problems

1. Calculate

- i. Break even point (unit and sales)
- ii. Number of units that must be sold to earn a profit of Rs. 1,00,000 per year
- iii. How many units are to be sold to earn a net income in 15% of sales

From the following data

Selling price per unit Rs. 45

Variable Manufacturing cost per unit Rs. 25

Variable selling cost per unit Rs. 5

Fixed factory overheads Rs. 1,50,000

Fixed selling cost Rs. 30,000

2. The following information is obtained from A Ltd for the year 2000

Sales Rs. 60,000

Variable cost Rs. 30,000

Fixed Cost Rs. 15,000

You are required to calculate PV ratio, BEP and Margin of safety at this level and calculate the effect of 10% increase in sales price

3. You are given the following data for the year 2008

Variable cost Rs. 6,00,000

Fixed Cost Rs. 3,00,000

Net profit Rs. 1,00,000

Sales Rs. 10,00,000

Find out:

1. PV Ratio
2. BEP
3. Profit When sales amounted to Rs 12,00,000
4. Sales required to earn a profit of Rs. 2,00,000

4. Following data are available from the records of a company

Sales Rs 1,20,000

Variable Cost Rs. 60,000

Fixed Cost Rs. 30,000

Calculate:

- a. PV ratio, BEP and margin of safety at this level
- b. The effect of 10% increase in Sales price on BEP
- c. The effect of 10% decrease in sales price on BEP

5. The following information related to production and sales of an article for January and February 2002

	January (Rs)	February (Rs)
Sales	38,000	65,000
Profit	-	3000
Loss	2,400	

Calculate: PV ratio, Fixed cost, BEP, Profit or loss at Rs. 46,000 sales, sales to earn a profit of Rs. 5,000

6. The sales and profit for two years are as below:

Year	Sales (Rs)	Profits (Rs)
2004	1,50,000	20,000
2005	1,70,000	25,000

Calculate:

1. P/V ratio
2. BE Point
3. Sales required to earn a profit of Rs.40,000
4. Margin of safety at a profit of Rs. 1,25,000
5. Variable Cost of the two years
6. Profit when sales are Rs. 1,80,000

7. From the following details calculate
1. P/V ratio
 2. Fixed cost
 3. BE Point
 4. Sales required to earn a profit of Rs.20,000
 5. Margin of safety at a profit of Rs. 15,000
 6. Profit when sales are Rs. 1,00,000

The sales and profit for two years are as below:

Period	Sales (Rs)	Profits (Rs)
I	1,20,000	9,000
II	1,40,000	13,000

8. From the following data, draw a Break even chart showing
The break even point. Use graph paper
- Budgeted out put 80,000 units
Fixed Expenses Rs. 8,00,000
Variable cost per unit Rs. 20
Selling price per unit Rs. 40

5 Marks Problems

9. Sales 10,000 units @ Rs. 20 Per unit
Variable cost Rs. 10 per unit
Fixed cost Rs. 10 per unit
Fixed cost Rs. 80,000
- Find out break even point in units as well as in amount and also profits earned. What should be the sales for earning of profit of Rs. 60,000

10. Sales 5,000 units @ Rs. 10 Per unit

Variable cost Rs. 5 per unit

Fixed cost Rs. 5 per unit

Fixed cost Rs. 40,000

Find out break even point in units as well as in amount and also profits earned. What should be the sales for earning of profit of Rs. 30,000

11. Following are the statement of cost and sales

Fixed Costs 1,80,000

Variable Costs 2,80,000

Net sales 4,20,000

Determine BEP an margin of safety in rupees

12. From the following information calculate

1. Profit volume ratio
2. Fixed csots
3. Sales Volume to earn a profit of Rs. 40,000

Sales Rs. 1,00,000

Profit Rs. 10,000

Variable cost 70%

5. Calculate Margin of Safety from the following data

	Sowmya &Co	Veen & Cp
	Rs	Rs
Sales	1,00,000	1,00,000
Cost (total including fixed and variable)	80,000	80,000

Fixed	RS
Sowmya & Co	30,000
Veen & Co	50,000
Variable	

Sowmya & Co	50,000	
Veen & Co	30,000	
Profit	20,000	20,000

Section-A

1. Define Marginal Costing
2. What do you mean by marginal cost?
3. What is Fixed cost?
4. What is Break Even Analysis?
5. What is margin of safety?
6. What is P/V Ratio
7. What is contribution?
8. State any two features of marginal costing
9. Give the formula for margin of safety
10. What is variable cost? Give two examples
11. What is BEP?

Section – B

1. State the advantages and disadvantages of marginal costing
2. State the advantages of Break even analysis

Marginal Costing

Chapter – 2

1. Define Marginal Costing

The ICMA, London, had defined, “Marginal costing as the ascertainment of marginal cost and of the effect on profit of changes in volume or type of out put by difference between fixed cost and variable cost “.

2.What do you mean by marginal cost?

Marginal costing is based on the distinction between fixed cost and variable cost. Only variable cost are applied to products. All fixed cost are written off to the profit and loss account. Even the semi-variable costs are for this purpose segregated into fixed and variable components.

It makes a basic assumption that excess of selling price over variable cost provides a fund to meet firstly the fixed costs and then to provide company’s profit.

3 What is Fixed cost?

A fixed cost is one which remains unchanged in total amount over a wide range of production level eg building rent, Permanent staff salaries etc.

Fixed cost per unit will vary with a change in the volume of output.

4. What is Break Even Analysis?

Break even analysis is concerned with determining break-even point I,e that level of production and sales where there is no profit and no loss. At the point, total cost is equal to total sales revenue.

5. What is margin of safety?

Margin of safety represents the amount by which volume of sales exceeds the break down point and the actual output represents the margin of safety.

Margin of Safety = Total sales – Sales at BEP

6. What is P/V Ratio?

Profit volume ratio is established in the relationship between contribution and sales. It is another method used to calculate the cost volume profit relationship which is known as P/V ratio. It helps for studying the profitability of operations of a business.

7. What is contribution?

It is evident from the marginal cost equation that contribution is the excess of the sales value over the marginal cost of sales. This is also known as Gross margin or contribution, which first meets the fixed cost and excess of over fixed cost, represents profit.

8. State any two features of marginal costing

- Segregation of costs into fixed and variable elements
- Marginal costs as product costs
- Fixed costs as period costs
- Valuation of inventory
- Contribution

9. What is variable cost? Give two examples?

Variable cost per unit remains constant while the total amount of variable cost changes in direct proportion to changes, in the level of production eg: Raw materials consumed.

10. What is BEP?

Profit volume ratio is established in the relationship between contribution and sales. It is another method used to calculate the cost volume profit relationship which is known as P/V ratio. It helps for studying the profitability of operations of a business.

Unit – 3

Standard costing

Standard cost

According to chartered institute of management Accountants (CIMA), UK,

“Standard cost is the pre-determined cost based on technical estimates for materials, labour and overhead for a selected period of time for a prescribed set of working conditions”.

Standard costing

CIMA has defined standard costing as, “the preparations of standard costs and applying them to measure the variations from actual costs and analysing the causes of variations with a view to maintain maximum efficiency in production”.

Thus standard cost is defined as a pre-determined calculation of how much costs should be under specified working conditions.

Material price variance

Material price variance may be defined as the difference between the actual price and the standard price.

Material price variance = Actual quantity X (Standard price – Actual price)

$$\text{MPV} = \text{AQ} \times (\text{SP} - \text{AP})$$

Material Usage Variance

It is the difference between the actual quantity for material consumed and the standard quantity which should have been consumed.

Material Usage Variance = standard price X (standard quantity - Actual Quantity)

$$\text{MUV} = \text{SP} \times (\text{SQ} - \text{AQ})$$

Material cost variance

Material cost variance = Standard cost – Actual Cost

$$\text{MCV} = (\text{SQ} \times \text{SP}) - (\text{AQ} \times \text{AP})$$

Where, **Standard cost** = standard quantity X standard Price

Actual cost = Actual quantity X Actual price

Problems:

Illustration – 1

From the following information calculate. Material cost variance separately for P & Q

Material	Standard quantity Kg	Standard Price	Actual Quantity Kg	Actual price
P	20	2	25	2.5
Q	30	3	35	2.75

Illustration – 2

A product Z requires 25 units of standard materials at the rate of Rs.5 per unit. The actual consumption of material for the manufacturing of product Z came to 20 units of material at the rate of Rs.4 per unit. Calculate Material Price Variance

Illustration – 3

The standard quantity and standard price of raw material required for one unit of product Z are given as follows.

	Quantity	Standard price
Material A	2kgs	Rs.2 per unit
Material B	6kgs	Rs.4 per unit

The actual production and relevant data are as follows: output 500 units of product Z

	Quantity	Total cost
Material A	1,200Kgs	Rs.3,400
Material B	1,600Kgs	Rs.3,900

Calculate Material Usage Variance.

Illustration – 4

The standard material and standard cost per Kg of material required for the production of one unit of product R is as follows.

Material 10Kgs

Standard price – Rs.4 per kg

The actual production and related material data are as follows

500 units of product R

Material used 3,000kgs
 Price of material RS 5 per kg
 Calculate:

- a) Material Cost Variance
- b) Material Usage Variance
- c) Material Price Variance

The material usage variance can be sub-divided into two component namely –

- 1) Material Mix Variance**
- 2) Material Yield Variance**

Material Mix Variance

Material Mix Variance is that portion of the direct material usage variance which is the difference between the actual quantities of ingredients used when mixed at standard price and the total quantity of ingredients used at the weighted average price per unit of ingredients as shown by the standard cost sheets.

The mix variance arises because of changing the proportion in which the different ingredients in the mixture are combined to produce a given product. Scarcity of one ingredient for example may necessitate using a different ingredient in larger quantities.

$$\text{Material Mix Variance} = \text{Standard price} \times (\text{Revised standard Proportion of Actual Input} - \text{Actual Proportion})$$

Illustration – 5

Calculate the material mix variance from the following data:

Particulars	Standard	Actual
Material A	50kgs @ Rs.5	40kgs @ Rs.6
Material B	30kgs @ Rs.6	40kgs @ Rs.5
	80kgs	80kgs

Illustration – 6

From the information given below, compute the material mix variance

Particulars	Standard	Actual
R	40kgs @ Rs.50 per kg	50kgs @ Rs.50 per kg
S	60kgs @ Rs.40 per kg	60kgs @ Rs.45 per kg
	100kgs	110kgs

Material Yield Variance

It is that portion of the direct material usage which is the difference between the standard cost of the production achieved whether completed or not and the actual cost of that production arrived at by multiplying the actual cost of that production, arrived at by the weighted average price per unit as shown by the standard cost sheet.

The yield variance arises because of the difference between the standard yield specified and the actual yield obtained. This is generally due to abnormal losses in production, qualitative difference in input such as dampness in the material.

$$\text{Material Yield Variance} = (\text{Actual loss on Actual Input} - \text{Standard Loss on Actual Input}) \times \text{Average standard price per unit.}$$

Where

$$\text{Average standard price per unit} = \frac{\text{total cost}}{\text{Standard output}}$$

Illustration – 7

Calculate material yield variance from the information given below:

Particulars	Standard	Actual
Material X	200kgs @ Rs.5 = Rs.1,000	200kgs @ Rs.5 = Rs.1,000
Material Y	500kgs @ Rs.3 = Rs.1,500	500kgs @ Rs.3 = Rs.1,500
Total	700kgs	700kgs
Less: Wastage	75kgs	100kgs
Total	625kgs Rs.2,500	600kgs Rs.2,500

Illustration – 8

Given the following information calculate –

- 1) Material cost Variance
- 2) Material Price Variance
- 3) Material Mix Variance
- 4) Material Usage Variance
- 5) Material Yield Variance

Material	Standard			Actual		
	QTY	Rate	Amount	QTY	Rate	Amount
X	500	5	2,500	300	5	1,500
Y	400	4	1,600	600	4	2,400
Z	300	3	900	400	3	1,200
Total Quantity	1,200	-	-	1,300	-	-
Less: 10% Normal Loss	120	-	-	-	-	-
Actual Loss	-	-	-	220	-	-
Total	1,080	-	5,000	1,080	-	5,100

Direct Wages Cost Variance

The ICMA terminology defines direct labour cost variances as “the difference between the standard direct wages specified for the production achieved whether completed or not and actual direct wages incurred.

Labour cost Variance = Standard Labour Cost of actual Output - Actual Labour Cost

Or **Labour Cost Variance = SC - AC**

SC = Standard cost

AC = Actual Cost

Or **Labour Cost Variance = (SH X SR) - (AH X AR)**

SH = Standard Hours

SR = Standard Rate

AH = Actual Rate

AR = Actual Rate

Illustration – 9

Calculate Labour Cost Variance with the information given below:

- Actual Rate – Rs.4 per hour
- Actual Hours – 16,000 hours
- Actual Production – 1,200 units
- Standard – Rs.4.60 per hour
- Standard hours per unit – 20

Direct Wages Cost Variance is broken down into two components namely –

- a) **Direct Wages Rate Variance and**
- b) **Direct Wages Efficiency Variances.**

Direct Wages Rate Variance

The ICMA terminology defines the direct wages rate variances as “that portion of the Direct Wages Cost Variance, which is due to the difference between the standard rate of pay specified and the actual rate paid”.

$$\text{Direct Actual Rate} = \text{Actual Hours} \times (\text{Standard Rate} - \text{Actual Rate})$$

Illustration – 10

M/s Anandi Ltd manufactures a particular article, the standard direct labour cost of which is Rs.120 per unit as given below:

Type of workers	Hours	Rate	Amount Rate
X	20	3	60
Y	30	2	60
	50		120

During a period, 110 units of the articles were manufactured, the actual labour cost of which was as follows:

Type of workers	Hours	Rate	Amount Rate
X	4,000	2	8,000
Y	2,000	3	6,000
	6,000		14,000

Calculate Labour Rate Variance.

Direct Wages Efficiency Variances

The ICMA terminology defines the Direct Wages Efficiency Variances as “that portion of the Direct Wages Efficiency Variance which is the difference between the standard direct wages cost

for the production achieved whether completed or not, and the actual hours at standard rate (plus incentive bonus if any)".

$$\text{Direct Wages Efficiency Variance} = \text{Standard Rate X (standard Time for actual output – Actual Time)}$$

Or
$$\text{Direct Wages Efficiency Variance} = \text{SR(ST – AT)}$$

Illustration – 11

Sri Shanmugam & Sons Furnishes you the following data Compute Labour Efficiency Variance.

- Standard labour hours unit 50 hours
- Standard labour rate per hour Rs.4
- Actual Production 100 units
- Actual labour rate per unit Rs.5
- Actual labour for production 4,000 hours

Classification of labour Efficiency Variance

It can be further divided into following:

- I. Idle Time variance
- II. Labour Mix Variance
- III. Labour Yield Variance

Idle Time variance

This variance arises whenever there is an abnormal idle time caused by power failure, machine breakdown etc. this Variance will always be unfavourable. It is calculated as follows:

$$\text{Idle Time variance} = \text{Idle hours X Standard Rate per hour}$$

Illustration – 12

100 workers are working in a factory at a standard wage rate of Rs.4.80 per hour. The standard performances is set at 360 units per hour. The actual production was 56,000 units. There was a power failure which stopped production for 2 hours. Calculate idle time variance.

Labour Mix Variance or Gang Composition Variance

This is similar to the material mix variance and arises because of a change in the composition of the work force. This may arise when skilled labour is made to do the job normally done by unskilled labour.

$$\text{Labour Mix Variance} = \text{Standard Rate} \times (\text{Revised standard hours} - \text{Actual Hours})$$

$$\text{Where } \text{Revised Standard hours} = \frac{\text{Standard hours of the grade}}{\text{Total Standard hours}} \times \text{Total actual hours}$$

Illustration – 13

A reputed firm gives the detail of grade A & B worker the standard direct labour cost of which is RS. 100 per unit. The details are given below:

Grade of workers	Hours	Rate	Amount
A	25	2.5	62.50
B	20	2	40.00
	45		102.50

During a period 80 unit of the product were produced, the actual labour cost of which are as follows.

Grade of workers	Hours	Rate	Amount
A	3000	2	6000
B	1600	3	4800
	4600		10800

Calculate Labour Mix Variance

Labour Yield Variance

This variance is similar to material Yield Variance. This variance reveals the effect on labour cost of actual output or yield being more or less than the standard yield.

$$\text{Labour Yield Variance} = (\text{Actual Yield} - \text{Standard yield from Actual output}) \times \text{Standard labour cost per unit of output}$$

Illustration – 14

- Standard Time 1,500 hours
- Standard Rate Rs.15 per hour
- Actual output 450 units
- Standard Output 500 units

Calculate Labour Yield Variance.

Illustration – 15

The details regarding the consumption and the weekly wages rates of labour force engaged on a job scheduled to be completed in 30 weeks are as follows.

Category of workers	Standard		Actual	
	No. of Labourers	Weekly wage Rate per labourer	No of Labourers	Weekly wage Rate per labourer
Skilled	75	60	70	70
Semi-skilled	45	40	30	50
Unskilled	60	30	80	20

The work is actually completed in 32 weeks calculate the various labour Variances.

Illustration – 16

The standard material required to manufacture 1 unit of product 'X' is 10 kgs and the standard price per kg of material is Rs.25. the cost accounts records however reveal that 11,500kgs materials costing Rs.2,75,000 were used for manufacturing 1,000 units of product 'X'. Calculate Material variances.

Illustration – 17

The standard materials required for producing 200 units is 250kgs. The standard price of 0.60 paise per kg 2,50,000 units were produced during the period. Actual materials purchased were 3,20,000kgs at a cost of Rs.1,95,200.

From the above Calculate

- Material Cost Variance
- Material Price Variance
- Material Usage Variance

Illustration – 18

The following information is obtained from a standard cost card.

- Labour Rate = Rs.1.80 per hour
- Hours = 4 hours per unit

Actual production data are:

- Units produced - 400 units
- Labour Rate - Rs.1.90 per hour

- Hour worked - 1,500

Calculate:

- Labour Cost Variance
- Labour Rate Variance
- Labour Efficiency Variance .

Illustration – 19

The standard Material cost to prepare a ton of chemical X is

- 200kgs of material A @ Rs.10 per kg
- 300kgs of material B @ Rs.5 per kg
- 400kgs of material C @ Rs.7 per kg

During a year 100 tons of material X were produced from the usage of

- 30 tons of material A at a Cost of Rs.9 per ton
- 40 tons of material B at a Cost of Rs.6 per ton
- 50 tons of material C at a Cost of Rs.7 per ton.

Calculate:

- Material Cost Variance
- Material Price Variance
- Material Usage Variance.

Illustration – 20

For making 10kg of GEMCO the standard material requirements is

Material	Quantity Kg	Rate per Kg in Rs.
A	8	6
B	4	4

During April 1000Kgs. Of GEMCO were produced. The actual consumption of material is as under.

Material	Quantity Kg	Rate per Kg in Rs.
A	750	7
B	500	5

Calculate:

- Material Cost Variance
- Material Price Variance
- Material Usage Variance.

Illustration – 21

The standard mix to produce one unit of product is as follows:

Material	Quantity in units	Rate per unit in Rs.	Amount in Rs.
A	60	15	900
B	80	20	1,600
C	100	25	2,500
Total	240		5,000

During the month of April, 10 units were actually produced and consumption was as following

Material	Quantity in units	Rate per unit in Rs.	Amount in Rs.
A	640	17.50	11,200
B	950	18.00	17,100
C	870	27.50	23,925
Total	2,460		52,225

Calculate all material Variances.

Standard costing

Chapter - IV

1. Define standard cost?

According to CIMA “Standard Cost is the pre-determined cost based on technical estimates for materials, labor, and overhead for a selected period of time for a prescribed set of working condition”

2. What is standard costing?

A procedure or method for selling the predetermined cost estimation for providing a basis for company with the actual cost is called standard costing.

3. Define standard costing?

CIMA has defined standard costing as “The preparation of standard costs and applying them to measure the variations from actual costs and analyzing the causes of variations with a view to maintain maximum efficiency in production”.

4. What do you mean by variance?

Variance is the difference between standard cost and the actual cost incurred during a given period of time.

5. What is meant by material cost variance?

Material Cost Variance is the difference between the standard cost of direct materials specified for the out put achieved and the actual cost of direct materials used
 $MCV = \text{Standard quantity for actual output} \times \text{standard price} - (\text{Actual quantity} \times \text{Actual price})$

6. What is labor cost variance?

The ICMA terminology defines direct labor Cost variance as “the difference between the standard direct wages specified for the production achieved whether completed or not and actual direct wages incurred.

Labor Cost variance = Standard Labor Cost of actual Output – Actual Labor Cost

7. Differentiate between favorable and unfavorable variance

When actual cost is less than standard cost, the difference is called favourable variance .

When actual costs exceed standard cost, the difference is called adverse or Unfavorable variance.

Section B

1. Discuss the advantages and limitations of standard costing
2. State the reasons for about efficiency variances
3. State advantages and disadvantage of standard costing

Budgetary Control

Chapter - 3

Meaning & Definition of Budget:

According to Brown and Howard, “A budget is a pre-determined statement of management policy during a given period which provides a standard for comparison with the results actually achieved”.

Characteristic:

- A budget is primarily a planning and control device
- A budget is prepared in monetary terms and/or quantitative terms
- A budget is prepared for a definite future period
- It show planned income and expenditure and also the capital to be employed
- It is prepared to implement the policies formulated by the management

Budgeting:

The act of preparing budgets is called budgeting. In the words of Batty, “the entire process of preparing the budgets is known as budgeting.

Meaning of Budgetary Control:

Budgetary control is a system of controlling costs through preparation of budgets. Budgeting is thus only a part of the budgetary control.

Objectives of Budgetary Control:

- Planning
- Co-ordination
- Motivation
- Communication
- Motivation
- Control
- Performance evaluation

Classification of Budgets:

1. Functional Budgets
2. Fixed and Flexible budgets

1. Functional Budgets:

A functional budget is one which relates to a function of the business.

a. Sales budget:

The sales budget is a statement of planned sales in terms of quantity and value. It forecasts what the company can reasonably expect to sell to its customers during the budget period.

b. Production Budget:

The production budget is an estimate of production for the budget period. It is first drawn up in quantities of each product and when the remaining budgets have been prepared and cost of production calculated, then the quantities of production cost are translated into money terms, what is effect becomes a production cost budget.

c. Production cost Budget:

This budget shows the estimated cost of production that the quantities of production is expressed in terms of cost in production cost budget.

d. Raw Material Budget:

This budget shows the estimated quantities of all the raw material and components needed for production demanded by the production budget.

e. Purchase Budget:

The purchase budget provides details of the purchases which are planned to be made during the period to meet the needs of the business.

f. Labor Budget:

The labor budget represents the forecast of labor requirements to meet the demands of the company or the budget period. This budget must be linked with production budget and production cost budget.

g. Production Overhead Budget:

The production overhead budget represents the forecast of all the production overheads to be incurred during the budget period.

h. Administration Cost Budget:

This budget represents forecast of all administration expenses like directors fees, managing director's salary, office lighting, heating and air conditioning etc. Most of these expenses are fixed, so they should not be too difficult to forecast.

i. Capital Expenditure Budget:

This budget represents the expenditure on all fixed assets during the budget period. It include such items as new building, machinery, land and intangible items like patents, etc.

J. Cash Budget:

Cash budget is a detailed estimate of cash receipts form all sources and cash payments for all purposes and the resultant cash balance during the budget period.

2. Fixed and Flexible Budgets:

Fixed Budget:

A Fixed budget are those which are prepared on the basis of fixed or given level of activity. It does not make any change even if the level of activity changes in comparison with the budget.

Flexible Budget:

A flexible budget is on e which is designed to change in relation to the level of activity attained. Flexible budget are those which may frequently change according to the level of activity.

15 Marks Problems

1. The expenses for budgeted production of 10,000 in a factory are given below

Particulars	Per unit Rs
Materials	50
Labour	20
Variable overheads	10
Fixed overhead (Rs. 50,000)	5
Variable expenses (Direct)	2
Selling expenses (10% fixed)	10
Distribution expenses (20% fixed)	5
Administration expenses (Rs. 40,000)	4
Total cost per unit	106

Prepare a Flexible budget for production of 8,000 units, indicating each item of cost per unit.

2. A Manufacturing company has the production capacity of 20,000 units p.a. The expenses from production of 10,000 (50%) units for a period are furnished below:

	Per unit Rs
Materials	40
Wages	20
Manufacturing expenses (40% fixed)	10
Administration Expenses (all fixed)	5
Selling and Distribution expenses (60% fixed)	5
Total Cost	80
Profit	20
Sales	100

Prepare a flexible budget for 60%, 70% and 90% levels of activity. It is expected that the present unit selling price will remain constant upto 60% activity beyond which a 5% reduction is contemplated upto 90% activity levels.

3. Happy Ltd have prepared the flexible budget for the production of 10,000 units of a commodity manufactured by them

	Per unit Rs
Raw material	2.52
Direct Labor	0.75
Direct expenses	0.10
Work overhead (50% fixed)	2.50
Administration overhead (80% fixed)	0.40
Selling overhead (50% fixed)	0.20

Prepare a revised flexible budget for the production of 6,000 and 7,000 units. Showing total cost and cost per unit.

4. The details given below relate to 60% activity. When the production was 600 Units

Materials Rs. 120 per unit

Labor Rs. 50 Per unit

Expenses Rs. 15 Per unit

Factory expenses Rs. 50,000 (40% fixed)

Administration expenses Rs. 35,000 (60% fixed)

Prepare flexible budget showing marginal cost and total cost, for 60% 80% and 100 % activity.

5. Draw up a flexible budget for overhead expenses on the basis of the following data and determine overhead rates at 70% , 80% and 90% Plant capacity

	At 80% capacity
Variable overheads:	
Indirect labour	12,000
Stores including spares	4,000
Semi-variable overheads:	
Power (30% fixed, 70% variable)	20,000
Repairs and maintenance (60% fixed, 40% variable)	2,000

Fixed overheads:	
Depreciation	11,000
Insurance	3,000
Salaries	10,000
Total overhead	62,000

Estimated direct labours hours 1,24,000 hrs

6. Cost of an article at a capacity level of 7,500 units is given under 'A' or variation of 20% on capacity above or below this level, The individual expenses vary as indicated under 'B' below

A	B
Materials	37,500 (100% varying)
Labour Cost	22,500 (100% varying)
Power	1,875 (80% Varying)
Repair & Maintenance	3,000 (75% varying)
Stores	1,500 (100% varying)
Inspection	750 (20% varying)
Depreciation	15,000 (100% varying)
Administration over head	7,500 (25% varying)
Selling overhead	4,500 (50% varying)

Find out the cost of the production level of 6,000 units and 9,000 units

7. Prepare a flexible budget form the following data

Capacity 50%

Volume 10,000 units

Selling price per unit Rs. 200

Material Rs. 100

Labour Rs. 30

Factory overheads Rs. 30 (Rs. 12 fixed)

Administration overhead Rs. 20 (Rs. 10 fixed)

At 60% capacity material cost per unit increased by 2% and selling price per unit falls by 2% and selling price per unit increases by 5% and selling price per unit falls by 5%. Estimate the profit at 60% and 80% capacity.

8. Prepare a cash budget for the three months commencing 1st June, when the bank balance was Rs. 1,00,000

Months	Sales (Rs)	Purchase(Rs)	Wages(Rs)	Factory Exp (Rs)	Selling Exp(Rs)
April	80,000	41,000	5,600	3,900	10,000
May	76,000	40,000	5,400	4,200	14,000
June	78,000	38,000	5,400	5,100	15,000
July	90,000	37,000	4,800	5,100	17,000
August	95,000	35,000	4,700	6,000	13,000

20% of the sales are on cash basis. Customers are allowed 2 months credit. Suppliers allow one month credit

Lag in payment of wages 1 month

Lag in payment of factory expenses ½ a month

Lag in payment of selling expenses ¼ month

5 Marks Problems

1. Prepare a flexible budget for production 90% (9,000 units) on the basis of following information

Production at 50% capacity 5,000 units

	Per unit Rs
Raw material	75
Direct Labor	45
Direct expenses	20
Factory expenses	60,000 (40% fixed)
Administrative expenses	40,000

Section A

2. Define a budget
3. What do you mean by budget?
4. What is flexible budget
5. What is Master Budget?
6. Distinguish between fixed and flexible budget
7. State any two objectives of budgetary control
8. State the types of budget
9. What is budgeting
10. What do you mean by cash budget?

Section B

1. State the objective of budget
2. Explain the classification of budgets

Budgetary Control

Chapter V

1. Define a budget

According to Brown and Howard, “A budget is a pre-determined statement of management policy during a given period which provides a standard for comparison with the results actually achieved”.

2. What do you mean by budget?

According to Brown and Howard, “A budget is a pre-determined statement of management policy during a given period which provides a standard for comparison with the results actually achieved”.

3. What is flexible budget

A flexible budget is one which is designed to change in relation to the level of activity attained. Flexible budgets are those which may frequently change according to the level of activity.

4. What is Budgetary control?

Establishing the budget relating to the responsibilities of executives to the necessity of policy making going on comparison of actual with budget position is called budgetary control.

5. What is Master Budget?

Master budget can be called the summary of all budgets or comprehensive budget. The contents of master budget are Income and expenses statement, Balance sheet, schedule of cash payments and receipts, production schedule etc.

6. Distinguish between fixed and flexible budget

A Fixed budget are those which are prepared on the basis of fixed or given level of activity. It does not make any change even if the level of activity changes in comparison with the budget.

Where as, A flexible budget is one which is designed to change in relation to the level of activity attained. Flexible budget are those which may frequently change according to the level of activity.

7. State any two objectives of budgetary control

Planning, Co-ordinating, control

8. State the types of budget

Cash budget, Flexible budget, production budget, Sales budget, overhead budget, Master budget

9 What is budgeting

The act of preparing budgets is called budgeting. In the words of Batty, “the entire process of preparing the budgets is known as budgeting.

10. What do you mean by cash budget?

Cash budget is a detailed estimate of cash receipts from all sources and cash payments for all purposes and the resultant cash balance during the budget period.