Cost-Volume-Profit (CVP) Analysis & Budgeting

Cost-Volume-Profit Analysis

Cost-Volume-Profit [CVP] analysis is the analytical process for studying relationship among the costs, volume of production, price and the profit or loss of a manufacturing concern and these are critically and thoroughly examined and analysed. It is an integral part of the profit planning process of the firm. In fact this analysis assists the management to have a clear picture of the effect of changes in variable costs, part of fixed costs, sales price and volume of production on the profit of the concern.

Profit/Volume Ratio:

The Profit Volume Ratio, popularly known as the P/V Ratio or Contribution to Sales Ratio or Marginal Income Ratio. Symbolically,

P/V Ratio (or C/S Ratio)

= Contribution / Sales

= Contribution per unit / Selling price per unit

= Change in contribution / Change in sales

= Change in profit / Change in sales

= Profit / Margin of safety ratio

Where, C = contribution, S= sales, V =variable costs.

P/V ratio will indicate relative profitability of different products, processes or departments. A high P/V ratio indicates the comparatively huge amount may be spent by way of advertising and sales promotion for obtaining additional sales. An enhancement of P/V ratio will mean increasing the gap between sales and variable costs. This can be done by-increasing selling

price, reducing variable costs and altering sales mixture, i.e., product having low P/V ratio will be substituted by a product with a higher ratio.

Break-Even Analysis:

Break-Even Point:

The break-even point is a point where neither a profit nor a loss is made. At this point, sales revenue exactly equals total costs. The break-even point can be expressed in terms of number of units sold or in terms of sales value. Since profit at the break-even point is nil, therefore,

Sales at break-even point – Variable cost = Fixed cost

i.e., Contribution= Fixed cost

Break-even Point (in units) = Fixed Cost / Contribution per unit

Break-even Point (in sales value) = Fixed Cost/P-V Ratio

=Fixed cost x (Sales / Contribution)

Break-Even Chart:

The Break-Even Chart is a graphical representation of the Break-Even Analysis, more explicitly the CVP Analysis. According to the Terminology of CIMA, London, the break-even chart means 'a chart which shows the profit or loss at various levels of activity and the level of output at which neither profit nor loss is shown being termed as the break-even point.' This chart or graph is an important device to the management because it provides ready-made information regarding marginal analysis and decision-making at quick look.

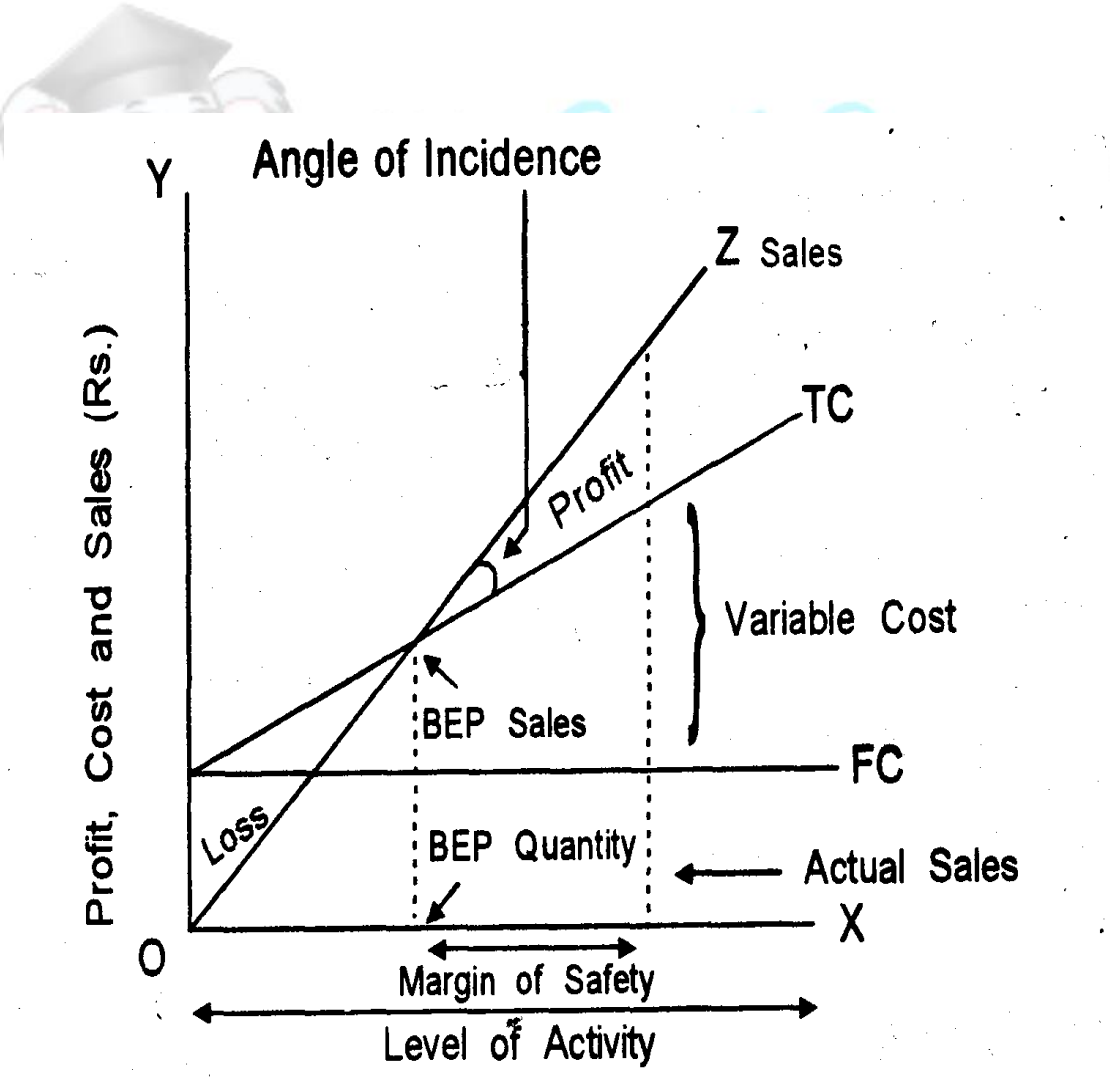
Assumptions of Break-even Analysis:

Break-even analysis is based on certain assumptions; some of the assumptions are as follows:

1. All costs can be classified into fixed and variable elements. So, there will have no semi-variable cost. But if such costs exist, it must be divided into fixed and variable elements.
2. Selling price per unit remains constant despite volume changes. So, irrespective of the

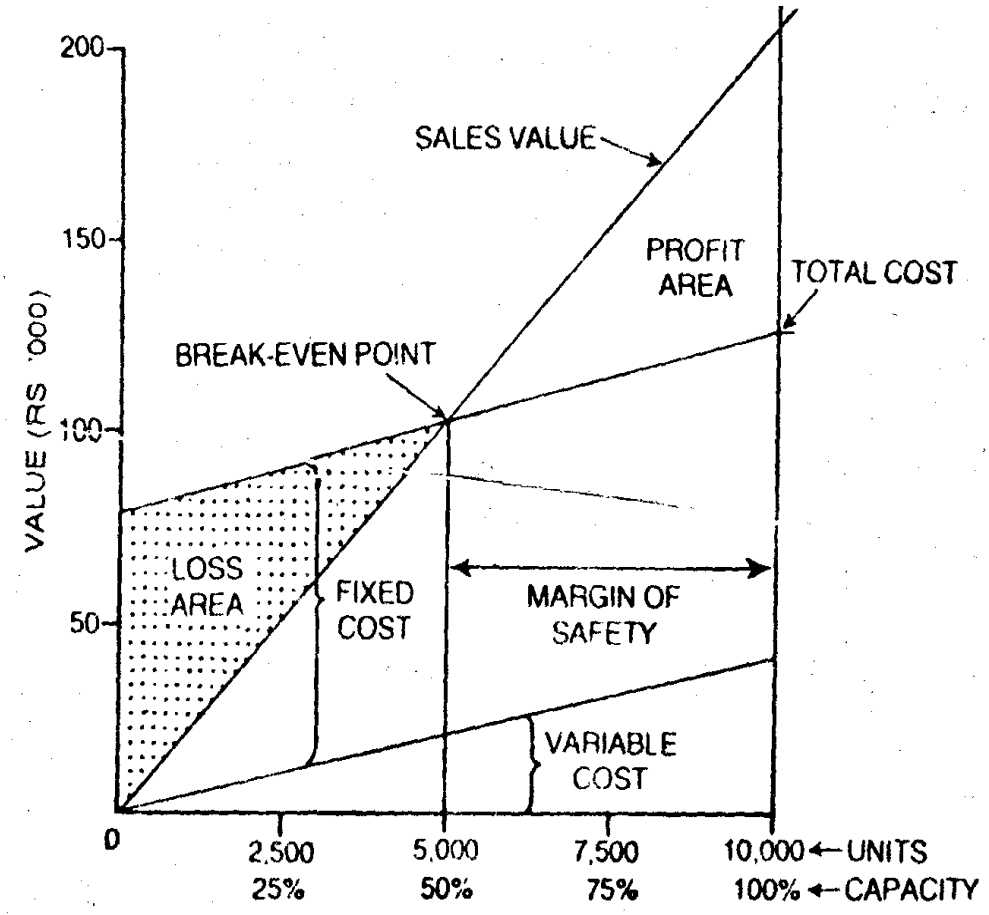
quantity of sales, total sales revenue will vary directly and proportionately.

3. Total fixed cost will remain constant and not at all changeable at any level of output.
4. There will have no opening and closing stock of product, i.e., quantity of output will coincide with sales.
5. There will be no change in the process of production, product-specification, mode of distribution, etc.
6. Operating efficiency will not vary, i.e., factory will operate at the pre-determined efficiency level.
7. There will not be any change in pricing policy due to change in quantity of sales, competition etc.
8. Sales mix and product mix will remain unchanged.
9. The behaviour of total revenue and total cost is linear in relation within the relevant range.

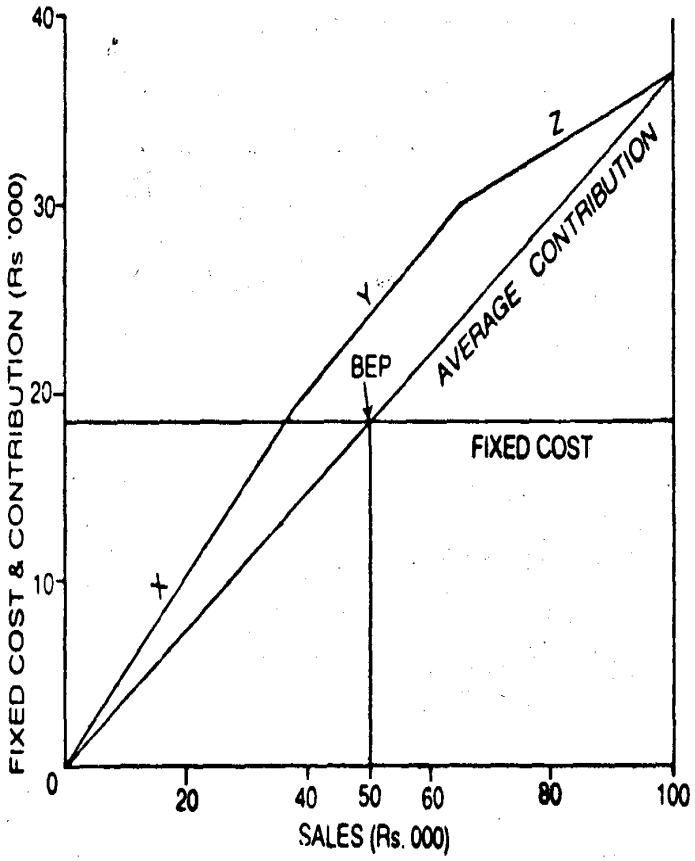


Different types of Break-even chart:

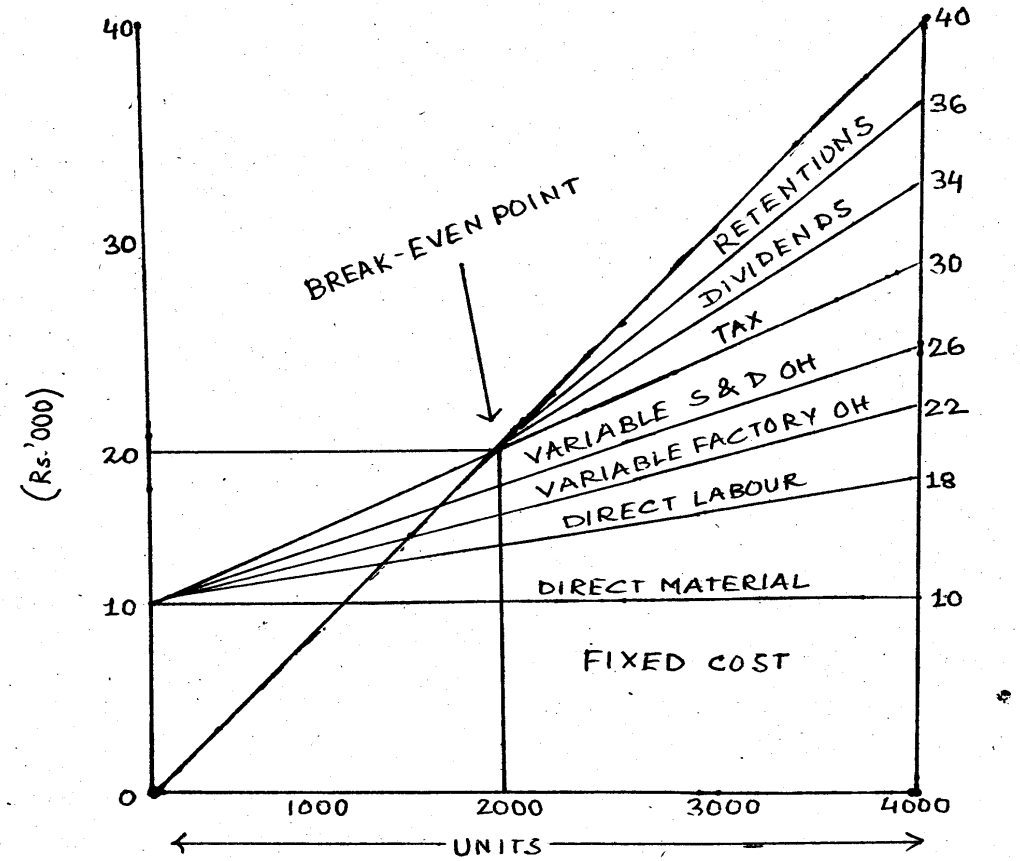
Contribution break-even chart: This type of presentation is more helpful to the management for decision making as it shows clearly the contribution margin at any volume of sales. Further, it appears from the chart that below the Break-Even Point it is the fixed cost which is not being covered fully.



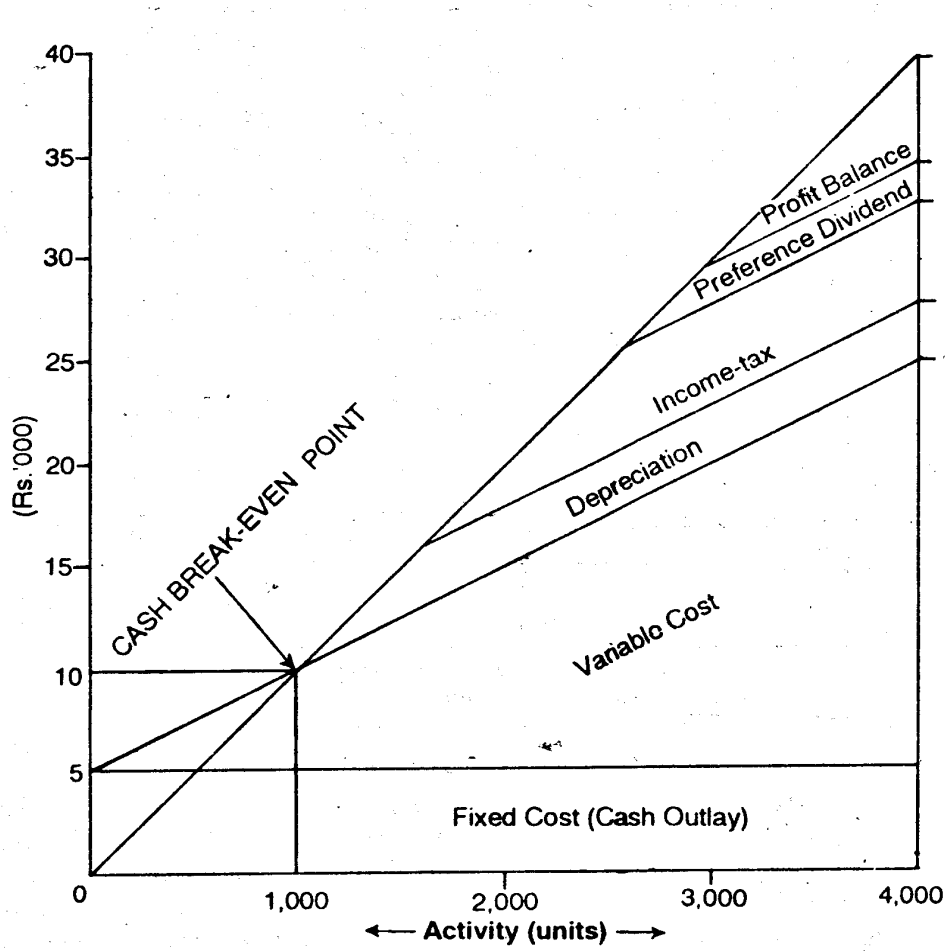
Multi-product break-even chart: When a company deals with numerous products it is feasible, and indeed desirable, to draw a break-even chart for the company as a whole (i.e. considering all the products in one chart) which is known as Multi-product break-even chart.



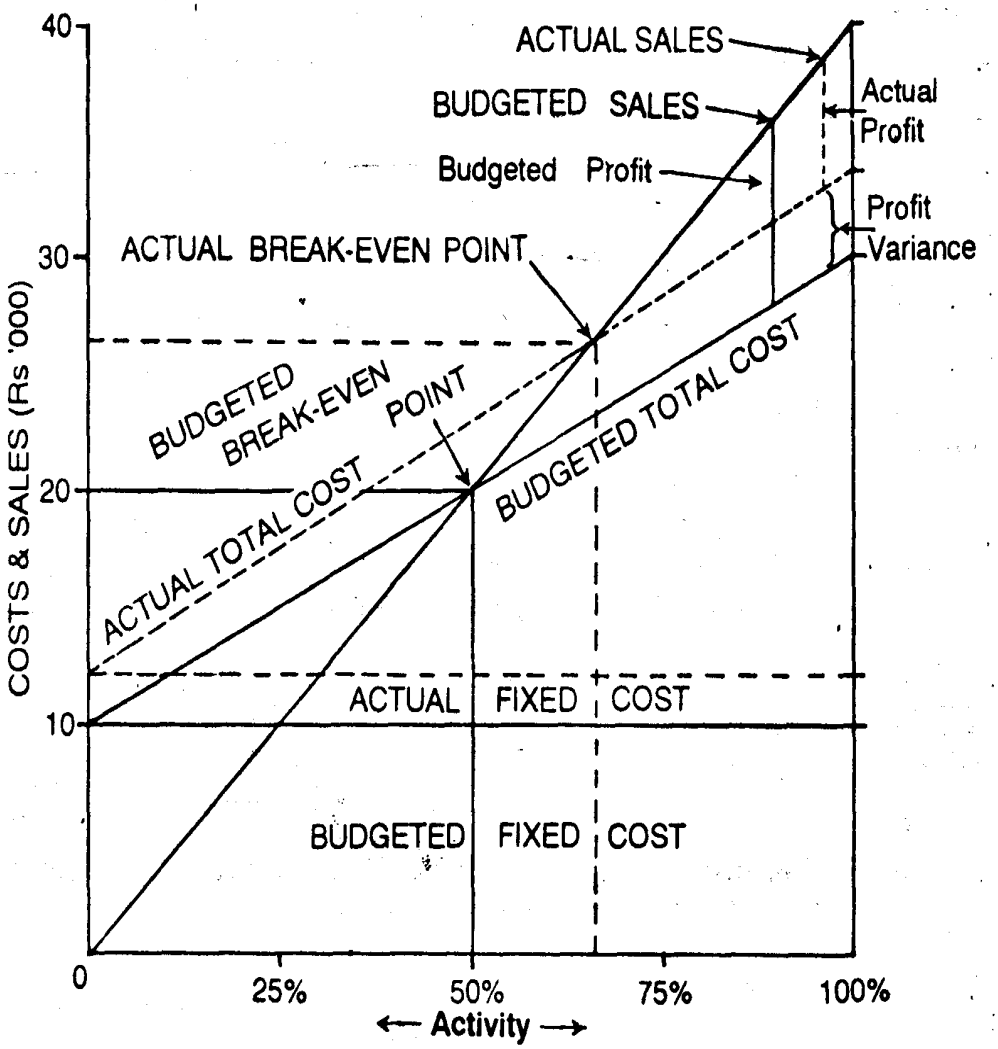
Detailed Break-Even Chart: In this chart details of costs- direct material, direct labour, variable overheads etc. are plotted. Apart from these, income tax, preference dividend, equity dividend and retentions are shown.



Cash break-even chart: It is useful for cash flow analysis and is extremely useful for enterprises running short of required solvency. It is a valuable guide in both short-run investment and financing decisions.



Control Break-Even Chart: By combining Budgetary Control and Marginal Costing, Control Break-Even Chart is drawn. It is pinpointing the deviations between budgeted/standard and actual figures and serves as an extremely useful tool inmanagement control.



Margin of Safety:

The difference between the total actual sales or output and the break-even sales or output is called the Margin of Safety. The more is the actual sales than the Break even sales, the more is the margin of safety. MOS is an indicator of the strength of a business. A greater margin of safety denotes soundness of a business, i.e., a high margin will indicate that profit will be made even if there is a substantial fall in sales. The adverse or undesirable or unsatisfactory margin of safety can be corrected by reducing fixed or variable costs or by increasing sale price. The equations for calculation of MOS are given earlier.

Angle of Incidence:

The angle created in between TR line and TC line is called the Angle of Incidence. This angle signifies the profit earning capacity over the Break-Even Point. The relationship between sales and profit can be analysed with the help of this angle. A large angle indicates high margin of profit and a small angle signifies low margin of profit. Generally, the angle of incidence is analysed along with the margin of safety. A large angle of incidence will mean a high margin of safety and a small angle of incidence will indicate a low margin of safety.

Advantages of Break-Even Analysis:

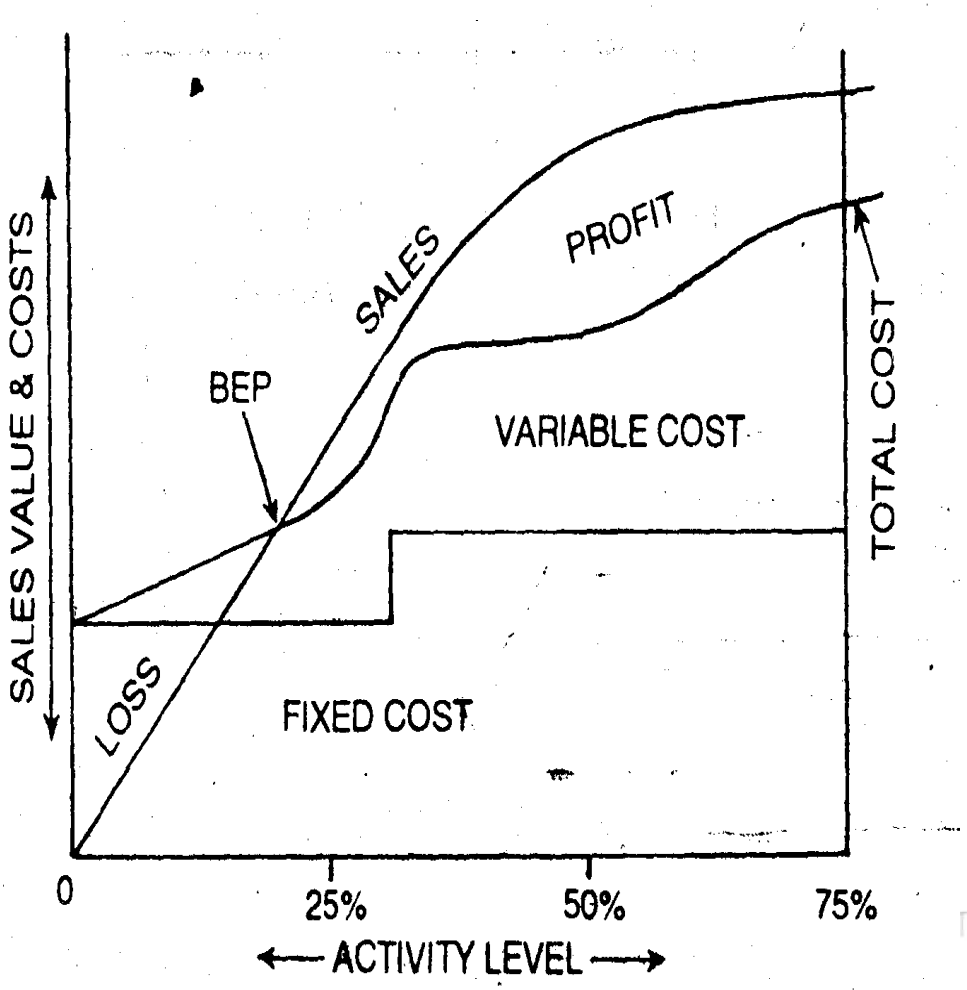
The following advantages may be derived by the management from Break-Even Analysis:

1. It is simple to compile and understand.
2. It expresses the amount of total fixed cost, variable cost and total cost to be incurred for different levels of output.
3. It helps the management to decide on the exact volume of goods to be manufactured.
4. It assists the management to decide on actually discarding or discontinuation of a particular line of production.

Limitations of Break-even Analysis:

The following disadvantages may be faced by the management from Break-Even Analysis:

1. In the simple chart, we have seen that the fixed cost line, variable cost line, total cost line and sales revenue line are straight lines. But in reality it may not be so. The figure below shows the real situation. Those lines are not practically linear due to their actual behaviour, and then the break-even point cannot be easily ascertained, in most cases. As a result the decision-making may be erroneous.

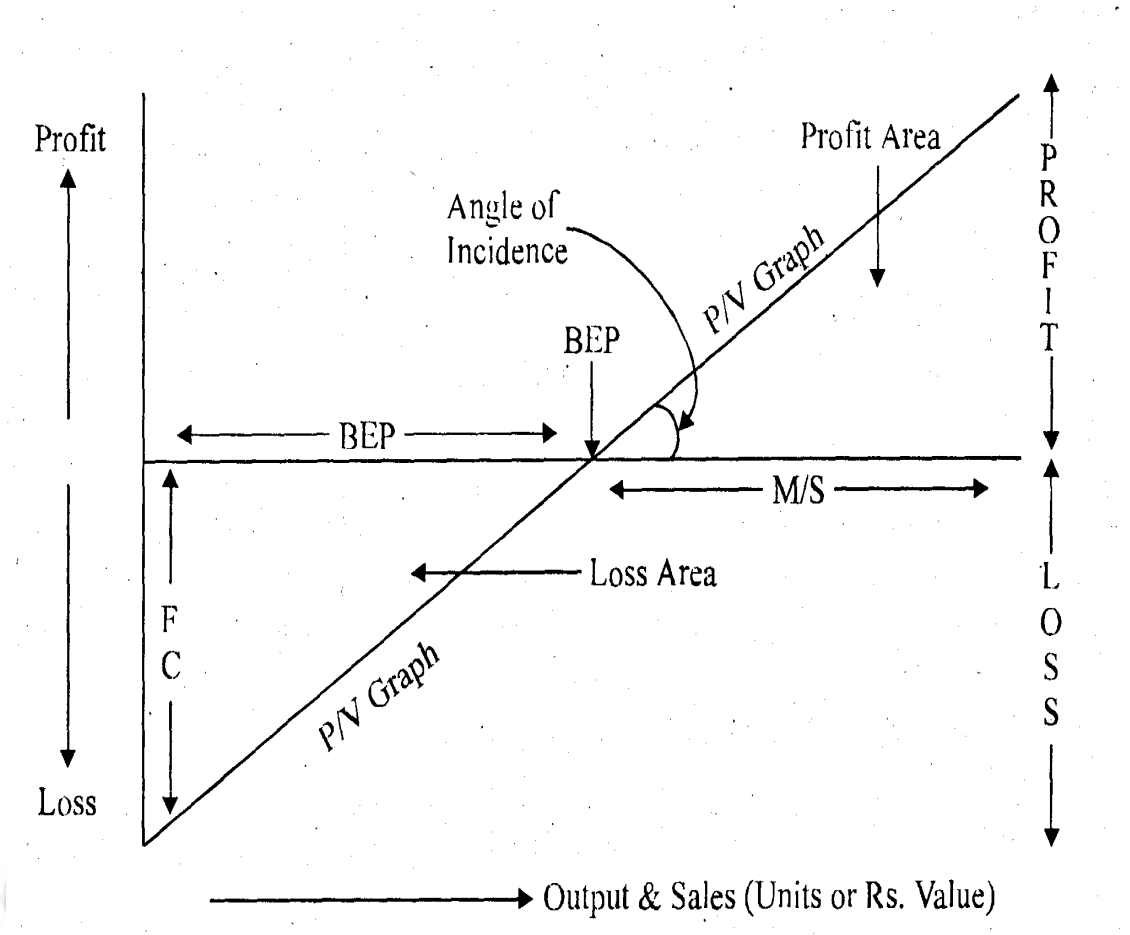


2. In practice, it is really impossible to classify total costs into fixed cost and variable cost and to segregate the semi-variable cost into fixed and variable elements.

3. Variable cost does not always vary exact proportionately with the volume of output because of application of "law of variable returns" at different stages. Again, fixed cost is not truly constant at all level of output because it has an inclination to rise to certain extent after passing a certain level of output.

Profit Volume Graph:

Profit volume graph is a graphical representation of the relationship between profit and volume. It is based on the same information and assumptions as are necessary for a break-even analysis or chart. It also suffers from the same limitations. The following is the figure of a simple profit volume graph.



Profit-Volume Graph

Example:

From the following data, illustrate the effect of changes in various factors given below:
Selling price per unit Rs.10

Variable cost per unit Rs.6.00

Fixed cost Rs.60,000

Current sales 20,000 units

Find out the following:

1. Effect of 20% increase in selling price,
2. Effect of 10% decrease in sales volume,
3. Effect of 20% decrease in variable costs, and

4. Effect of 10% increase in fixed costs.

Solution:

1. Effect of 20% increase in selling price

Output 20,000 per unit	**Total**		
		Rs.	**Rs.**
Sales	12	2,40,000	
Less: Variable cost		61,20,000	
Contribution		6 1,20,000	
Less: Fixed cost			60,000
Profit			60,000

Break-even point = $\frac{\text{Rs.60,000}}{\text{Rs.6}}$ = 10,000 units

Margin of safety = 20,000 – 10,000 = 10,000 units

MOS (as a percentage on total sales)

$\frac{\text{Rs.1,20,000}}{\text{Rs.2,40,000}} \times 100 = 50\%$

It has been observed that due to 20% increase in selling prices, the profit has increased by Rs.40,000, and BEP has decreased to 10,000 units or Rs.1,20,000.

2.Effect of 10% decrease in sales volume

Output 18,000 per unit	**Total**		
		Rs.	**Rs.**
Sales	10	1,80,000	
Less: Variable cost		61,08,000	

Contribution	4	72,000	
Less: Fixed cost		60,000	
Profit			12,000

P/V ratio= Rs.4/Rs. 10 x 100=40%

Break-even point $= \frac{\text{Rs.60,000}}{\text{Rs.4}} = 15{,}000$ units

MOS =18,000u – 15,000u = 3,000u

It may be noted that, 10% reduction in sales volume has affected only the margin of safety. There is no change in BEP since the P/V ratio and fixed cost are the same.

3. Effect of 20% decrease in variable costs

Output 20,000 per unit		**Total**	
		Rs.	**Rs.**
Sales	10	2,00,000	
Less: Variable cost		4.80 96,000	
Contribution	5.20	1,04,000	
Less: Fixed cost		60,000	
Profit			44,000

P/V ratio= Rs.5.20/Rs. 10 x 100=52%

Break-even point $= \frac{\text{Rs.60,000}}{\text{Rs.5.20}} = 11{,}539$ units

MOS 20,000u — 11,539u = 8,461 units

Reduction in variable cost will improve the P/V ratio and reduce BEP. Ultimately, the MOS will also increase.

4. Effect of 10% increase in fixed costs

Output 20,000 per unit

Total

		Rs.	Rs.
Sales	10	2,00,000	
Less: Variable cost		61,20,000	
Contribution	4	80,000	
Less: Fixed cost		66,000	
Profit			14,000

P/V ratio= Rs.4/Rs. 10 x 100=40%

Break-even point =$\frac{\text{Rs.66,000}}{\text{Rs.4}}$=16,500 units

MOS 20,000u — 16,500u = 3,500 units

Increase in fixed cost will increase BEP, P/V ratio of the original one will not change but there will be a reduction in MOS.

Definition of Budget:

Budget, in the ordinary sense of the term, denotes the facts related to the planned income and expenditure prepared for a specific future date. It is prepared in the form of a statement expressed either in monetary terms or only in numbers, or both. ***The Institute of Cost and Management Accountants, England,*** defines a budget as 'a financial and/or quantitative statement, prepared and approved prior to a defined period of time, of the policy to be pursued during that period for the purpose of attaining a given objective'.

Definition of Budgeting:

Budgeting means a very careful and conscious consideration about everything and all activities at the time of preparation of budgets. Budgeting includes forecasting and it leads to maximum utilisation of available resources.

Definition of Budgetary Control:

The ***ICMA*** (Institute of Cost and Management Accountants of England and Wales) has defined budgetary control as "The establishment of the budgets, relating the responsibilities of executives to the requirement of a policy and the continuous comparison of actual with budgeted result either to secure by individual action the objective of that policy or to provide a firm basis for its revision." There are four steps in Budgetary Control.

(i) Setting up of the standards,
(ii) Assessing the actual performances,
(iii) Measuring the variances and
(iv) Analysing the reasons of such variances.

Essential pre-requisites for budgeting:

The following are the essential pre-requisite for preparing budget of a concern:

Full support of Management: The successful implementation of a budget requires full support and co-operation of every member of the management, otherwise it will be ineffective.

Involvement of responsible executives: There must have an vigorous participation and involvement of different responsible executives, officers and other personnel in the preparation and implementation of budget.

Formal organisation: There must have clearly defined organisation where responsibility centres should be created through assignment of duty and delegation of authority, then only a budget can be successfully implemented.

Rational goals: The objective of preparation of budget should be in conformity with the goal of the concern and should have possibility of fulfilment; otherwise it will be a vague one.

Ample training to the workers: The success of a budget depends on proper engagement and functioning of the workers at different levels of activities. For this purpose the workers should have proper educational knowledge to increase their efficiency through proper training. Moreover written manual, group meeting etc. can create better result in certain cases.

Good accounting system: A proper accounting system is necessary for preparation and

implementation of budget successfully.

Constant attention and report: The budgeting will be more effective if the budget is constantly compared between the budgeted figures and actual performance.

Flexibility: One of the key good features of a budget that it will not be a rigid one, rather it will be flexible. If the factors vary in quantity and value regularly, the budget should be drawn for a number of activities or capacity levels.

Classification of budgets:

Generally budgets can be classified according to following viewpoints:

1. Classification according to time factor;

2. Functional Classification;

3. Classification according to flexibility factor.

Classification according to time factor:

Long-term Budgets: They are concerned with planning the operations of a firm perspective of five to ten years or even for twenty years. They are usually in the form of physical quantities.

Short-term Budgets: They are usually for a period of a year or two and are usually in monetary terms.

Current Budgets: They cover a period of a month or so and as short-term budgets, adjusted to prevailing circumstances.

Classification according to function:

Sales Budget: This is a forecast of total sales, classified according to groups of salesman and geographical locations.

Selling and Distribution Cost Budget: This is concerned with an estimate of the yelling and distribution of goods.

Marketing Budget: Apart from details of all advertising, promotional activities, public relations, marketing research, customer service, and so forth, the marketing budget can also include a summary of the sales, selling expenses and distribution expenses budgets.

Research and Development Budget: The budget covers materials, equipment and supplies, salaries, expenses, and other costs relating to design, development and technical research projects. This relates to improvement in the quality of the products or research for new products.

Production Budget: This is a forecast based on sales, productive capacity and requirements of inventories, etc.

Production Cost Budget: This is related to the cost of production, including direct material cost, direct labour cost and expenses.

Raw Materials Budget: It is paying appropriate attention to the desired stock levels.

Labour Budget: It ensures that the plan will make available at the right time with the required number of employees of relevant grade and suitable skills.

Manufacturing Overheads Budget: It is covering items such as consumable materials and waste disposal.

Purchase Budget: It deals with purchases that are required for planned production. Purchase would include both and indirect materials and goods.

Manpower Budget: This has reference to the utilisation of men and would include labour employed in productive activity.

Cash Budget: The cash budget, as its name signifies, summarises the estimated cash receipts and the estimated cash payments over the budget period. Its object is to ensure a balance between liquidity and profitability.

Plant Utilisation Budget: This is intended to cover the plant and machinery requirements to meet the budgeted production during the period.

Office and Administrative Budget: This budget represents cost of all office and administrative expenses, such as managing director's salary, staff salaries and expenses of like office power & lighting, office rent, rates & taxes etc.

Capital Budget: This is a forecast of acquiring fixed assets well in advance.

Master Budget: According to I.C.M.A., London, "The master budget is the summary budget incorporating its component functional budgets." The master budget represents the overall plan of operations developed by management for the company, covering a definite period of time, such as a year. On completion, the master budget will be submitted to the budget

committee together with the subsidiary budgets for approval.

Classification according to flexibility:

Fixed Budget: This is a budget in which targets are rigidly fixed. Such budgets are usually prepared from one to three months in advance of the fiscal year to which they are applicable. The static budget as it is sometimes called can be revised where necessity arises. Such budgets are preferred only where sales can be forecast with hundred percent accuracy which means, that the cost and expenses in relation to sales can be precisely ascertained.

Flexible Budget: A Budget which may change with the changed circumstances and conditions is called a Flexible Budget. Flexible Budget is a budget which is designed to change in accordance with the level of activity actually attained. Reasonable and probable levels of activities are taken into consideration side by side at the time of preparation of a flexible budget.

Origin of Zero-Base Budgeting:

Zero Base Budgeting is a new technique of budgeting introduced in recent times as a managerial tool. Under this method, before planning for an activity, it is judged, whether such activity is needed at all and whether such activity is acceptable with respect to cost outlay. As the name implies, this budget starts from "Zero Base", i.e., nothing. That is why this budget is known as zero-budget or nil-budget. It is assumed in this case that the allocation for the next period should be nil if the demand for the activity is not justified for every rupee. The manager of each department must justify his claim for budget allocation. In this case, every future possible activity must be justified.

The terminology of ***CIMA, London,*** defines the zero base budgeting or priority base budgeting as "a method of budgeting whereby all activities are evaluated each time a budget set. Discrete levels of each activities are valued and a combination chosen to match funds available."

The zero base budgeting was first introduced in USA in 1964. It was developed by ***Peter A. Phyrr*** in 1970 and used by him in Texas Instruments Corporation of U.S.A. as a manager of personnel control department. He is regarded as the 'father of zero-base budgeting'. In 1972, ***Jimmy Carter,*** the then Governor of Georgia introduced the zero base budgeting system as a means of controlling state expenditure. Again in 1977, ***Jimmy Carter,*** then the president of

USA also used the same in the Federal Government.

Features of ZBB:

Features of ZBB are as follows:

1. Zero (or scratch) is taken as the basis of budgeting.

2. Available resources are allocated to jobs in the order of priority to ensure optimum results.

3. All proposed activities are grouped into various decision packages.

4. Decision packages are evaluated by systematic analysis.

5. Final allocation of resources is done on the ranking of evaluation of all decision packages including the alternative decision packages.

6. A manager of a decision unit has to justify why there should be any budget allocation for the activities in his decision unit. His justification should be based purely on cost benefit analysis.

Advantages or importance of Zero Base Budgeting:

The main advantages or importance of Zero Base Budgeting are stated below:

Best alternative: As zero is taken as the initial point of every activity for preparation of budget, zero base budgeting can judge the best alternative by considering all the available alternatives.

Optimum utilisation of resources: ZBB technique can significantly assist the management in respect of optimum utilisation of resources and optimal allocation of scarce resources.

Cost-Benefit analysis: It makes the cost-benefit analysis properly for each activity and identifies the weak / inefficient and efficient areas of the concern. On the basis of the result of the analysis ranking of projects is done and funds are allocated in order of priority.

Disadvantages of ZBB:

Followings are the main disadvantages of ZBB:

Detrimental to long term benefit: ZBB puts emphasis on short term benefit as opposed to long term benefit.

Time consuming: Collection and analysis of data of alternative future projects as well as existing activities require time, money and energy.

Evaluation often becomes very difficult: As ideal standard of evaluation is not available, so estimation often becomes very difficult. Lack of technical knowledge makes it difficult.

Difference between ZBB and Traditional Budgeting:

Traditional Budgeting	Zero-Base Budgeting
Traditional budgeting is less laborious and does not require much expertise.	ZBB is much more laborious. It requires much time, thought, expertise and analysis on the part of manager.
In traditional budgeting emphasis is given on previous level of expenditure.	It starts with the premise that budget for the next period will be zero.
Traditional budgeting is an accounting oriented function.	ZBB is project (or decision) oriented function.
For preparing a traditional budget existing programme need not be rejustified.	For preparing a zero-base budget the existing and new projects are to be justified in the light of benefits and costs.
Preparing a traditional budget is a simple job monotonously done year after year.	Preparing a zero-base budget requires logical approach and it involves many complex steps to establish logic behind a proposal.
In case of a traditional budget the top management of the organisation is the ultimate decision-maker.	In case of ZBB it is the manager of the decision unit (and not the top management) who justifies the amount of expenditure.

Example:

SM Limited manufactures three products X, Y and Z. Using the information given below you are required to prepare budgets for the month of June:

(i) Sales in quantity and value, including total value.

(ii) Production quantities

(iii) Material usage in quantities

(iv) Material purchases in quantity and value, including total value.

Product		Quantity	Price each
			Rs.
Sales	X	2,000	100
	Y	4,000	120
	Z	3,000	140

Material used in the company's products are:

Material	M1	M2	M3
Unit cost	Rs. 6	Rs. 6	Rs. 9
Quantities used in:	Units	Units	Units
Product X	4	2	-
Y	3	3	2
Z	2	1	1

Finished Stocks:

Product	X	Y	Z
Quantities:			
1st June	1,500	1,500	400
31st June	1,000	1,600	500

Material Stocks:	M1	M2	M3
	Units	Units	Units
1st June	26,000	20,000	12,000
31st June	30,000	22,000	13,000

Solution:

Sales Budget

Products	X	Y	Z	Total
Sales Quantities	2,000	4,000	3,000	
Unit Selling Price	Rs. 100	Rs. 120	Rs. 140	
Sales Value	Rs. 2,00,000	Rs. 4,80,000	Rs. 4,20,000	Rs. 11,00,000

Production Budget

Products	X	Y	Z
Sales Quantities	2,000	4,000	3,000
(+)Closing Stock	1,000	1,600	500
	3,000	5,600	3,500
(-)Opening Stock	1,500	1,500	400
Production Quantities	1,500	4,100	3,100

Material Usage Budget

Production Quantities	Materials					
	M1		M2		M3	
	Units per Product	Total	Units per Product	Total	Units per Product	Total
X 1,500	4	6,000	2	3,000	—	—

Y 4,100	3	12,300	3	12,300	2	8,200
Z 3,100	2	6,200	1	3,100	1	3,100
Usage Quantities		24,500		18,400		11,300

Material Purchase Budget

		Materials		Total
	M1	M2	M3	
Usage Quantities	24,500	18,400	11,300	
(+)Closing Stock	30,000	22,000	13,000	
	54,500	40,400	24,300	
(-)Opening Stock	26,000	20,000	12,000	
Purchase Quantities	28,500	20,400	12,300	
Price per unit	Rs. 4	Rs. 6	Rs. 9	
Value of Purchase	Rs. 1,14,000	Rs. 1,22,400	Rs. 1,10,700	

Example:

From the following particulars prepare monthly cash budget of the DRD Ltd. for October, November and December of 2008:

Months	**Purchases**	**Sales**	**Wages**	**Expenses**
	Rs.	**Rs.**	**Rs.**	**Rs.**
July, 2008	40,000	60,000	8,000	10,000
August, 2008	60,000	80,000	10,500	12,000

September, 2008	50,000	70,000	17,500	12,500
October, 2008	70,000	90,000	17,100	11,600
November, 2008	80,000	1,00,000	12,000	11,800
December, 2008	60,000	1,20,000	12,000	12,300

It is expected that 50% of sales will be in cash and 25% of the purchases can be made on credit. Debtors are allowed 2 months credit but will receive 5% cash discount if they will pay off their dues within the month next to the month of sale. 80% of the debtors normally clear their dues at the end of that period to avail the cash discount. Rest 20% of the debtors would pay on the due date. 4/5 th of the credit purchase is paid after 1 month of that purchase and next to that month balance 1/5th is paid.

Wages are paid within 1/5th of the following month.

Expenses include selling and distribution expenses which are 10% of the sales.

Any deficiency in cash at the end of a month will be met by taking short term loan for two months from bank.

At the end of September, 2008 the DRD Ltd. had Rs. 40,000 cash in hand.

Solution:

Cash Budget for the quarter ended on 30th Dec, 2008

Particulars	**Oct.**	**Nov.**	**Dec.**
	Rs.	**Rs.**	**Rs.**
A. Sources of Cash			
Opening cash in hand	40,000	25,000	10,800
(+)Cash Sales	45,000	50,000	60,000
(+)Collection from Debtors	34,600	41,200	47,000
Total	1,19,600	1,16,200	1,17,800

B. Uses / Applications of Cash			
Cash Purchase	52,500	60,000	45,000
Payment to Creditors	13,000	16,500	19,500
Payment of Wages	17,500	17,100	12,000
Payment of Selling & Distribution Expenses	9,000	10,000	12,000
Payment of Other Expenses	2,600	1,800	300
Total	94,600	1,05,400	88,800
Closing Cash in hand (Balance figure) (A-B)	25,000	10,800	29,000

Working Notes:

Calculation of collection from debtors:

Oct=Rs.80,000 x 50/100 x 20/100 + Rs.70,000 x 50/100 x 80/100 x 95/100 =Rs.8,000 + Rs.26,600 =Rs.34,600

Nov=Rs.70,000 x 50/100 x 20/100 + Rs.90,000 x 50/100 x 80/100 x 95/100 =Rs.7,000 + Rs.34,200 =Rs.41,200

Dec=Rs.90,000 x 50/100 x 20/100 + Rs.1,00,000 x 50/100 x 80/100 x 95/100 =Rs.9,000 + Rs.38,000 =Rs.47,000

Calculation of payment to creditors:

Oct=Rs.60,000 x 25/100 x 1/5 + Rs.50,000 x 25/100 x 4/5 =Rs.3,000 + Rs.10,000 =Rs.13,000

Nov=Rs.50,000 x 25/100 x 1/5 + Rs.70,000 x 25/100 x 4/5 =Rs.2,500 + Rs.14,000 =Rs.16,500

Dec=Rs.70,000 x 25/100 x 1/5 + Rs.80,000 x 25/100 x 4/5 =Rs.3,500 + Rs.16,000 =Rs.19,500

Example:

The expenses budgeted for production of 10,000 units in a factory is furnished below:

	Per unit Rs.
Materials	140
Labour	50
Variable overheads	40
Fixed overheads (Rs. 2,00,000)	20
Variable expenses (direct)	10
Selling expenses (10% fixed)	26
Distribution expenses (80% variable)	14
Administration expenses (Rs. 1,00,000)	10
Total cost of sales per unit	310

Prepare a Budget for Production of (a)8,000 units, and (b)6,000 units. Assume that administration expenses are rigid for all levels of production.

Solution:

Flexible Budget

	8,000 units (Rs.)	10,000 units (Rs.)
Variable Cost:		
Materials	11,20,000	8,40,000
Labour	4,00,000	3,00,000
Variable overheads	3,20,000	2,40,000
Direct variable expenses	80,000	60,000
Semi-variable Cost:		

Selling expenses-Fixed	26,000	26,000
-variable	1,87,200	1,40,400
Distribution expenses-Fixed	28,000	28,000
-variable	89,600	67,200
Fixed Cost:		
Fixed overheads	2,00,000	2,00,000
Administration expenses	1,00,000	1,00,000
	25,50,800	20,01,600