

Unit : 2

Marginal Costing and Budgetary control (35%)

Syllabus

Marginal Costing - Meaning and Importance of Marginal Costing

Difference between Marginal costing and Absorption costing

Break Even Analysis (Numeric)

Budgetary Control - Meaning and Importance of Budgetary Control.

Types of Budgets - Flexible Budget (Numeric) and Cash Budget (Numeric).

2.1) Introduction

Generally, when determining the total cost of a product, both variable costs and fixed costs are aggregated to reach a final figure. However, for the purposes of strategic decision-making, product cost is frequently calculated based on variable costs alone; this concept is identified as Marginal Cost.

Marginal costing is not a primary method of cost determination in the same manner as job costing or traditional cost sheets. Instead, it serves as a specialized technique for decision-making that provides greater utility to management. Marginal costing is also referred to as direct costing, differential costing, incremental costing, or comparative costing.

In the application of marginal costing, only the variable components are taken into consideration. Consequently, it is a specific methodology utilized primarily for short-term decision-making and operational analysis.

2.2) Definitions :

- 1. Marginal Cost:** Marginal cost is the additional cost of production one additional unit. It is composed of all direct costs and variable overheads.

According to CIMA (Chartered Institute of Management Accounts) define marginal cost as "The amount at any given level of output

by which total costs are changed, if the volume of output is increased or decreased by one unit "And for that only variable cost is considered.

For example: imagine you run a small furniture workshop. You are currently producing 100 chairs. Total Cost for 100 Chairs is ₹ 10,000. A customer calls and asks for one more chair (the 101st chair). New Total Cost for 101 Chairs is ₹ 10,060.

Thus, Marginal Cost is the change in total cost when the output is increased by one unit:

$$\begin{aligned}\text{Marginal Cost} &= (\text{Total Cost of 1,001 units}) - (\text{Total Cost of 1,000 units}) \\ &= 10,060 - 10,000 \\ &= ₹ 60\end{aligned}$$

2. Marginal Costing: According to ICWA, Marginal costing is define as "The ascertainment of Marginal costs and of the effect on the profit of changes in the volume of output by differentiating between fixed costs and variable costs."

According to Dr. Joseph, "Marginal costing is a technique of determining the amount of change in the aggregate costs due to an increase of one unit over the existing level of production. Ass such, it arises from the production of additional increments of output"

3. Fixed cost: Fixed cost is one which tends to unaffected by variation in volume of output. Fixed cost is related to period and not to product. So, it remains constant for particular period. E.g. Rent of Factory RS. 10000 remains fixed for particular period (say 3 years) and it is not affected by change in level of output.

4. Variable Cost: Variable cost is one which vary directly with the level of output.

E.g. Direct Raw material used for Production is V.C., if level of output increases, raw material cost also increases and vice -versa. So V.C. is Product cost and not the period cost. Variable cost is taken as name of Marginal cost.

To determine the marginal cost, we need the following elements of Cost:

- (a) Direct Raw Material Cost +
- (b) Direct Labor or Wages +
- (c) Other Variable Expenses = Total Variable or Marginal Cost.

2.3) Assumptions of Marginal Costing:

1. All expenses are classified as fixed and variable only.
2. Efficiency of operations will remain unchanged.
3. There will be no change in selling price.
4. This method assumes that only level of output affects the costs. If level of output changes total cost changes. And no other factors affect the level of output.
5. No change in factors like material or labour.
6. There will be no change in policies of management.

The above assumptions do not tend to be correct in real life business operations.

2.4) Significance / Importance of Marginal Costing:

1. Helpful to Management Decisions

Marginal costing is primarily a tool for decision-making rather than just bookkeeping. It gives managers the precise financial data needed to evaluate complex business choices, such as whether to launch a new product, enter a new market, make a component versus buying it, or determine the correct price for a product to achieve specific profit goals.

2. Helps in Production Planning (CVP Analysis)

Marginal costing is the backbone of Cost-Volume-Profit (CVP) analysis. By understanding how costs behave in relation to production volume, managers can: calculate the Break-Even Point (where total revenue equals total cost), predict the exact profit amount at different proposed production levels as well as determine the sales volume needed to achieve a specific profit target.

3. Cost Control

This technique enhances cost control by dividing expenses into fixed and variable categories. Management can focus intensely on variable costs (like raw materials and direct labour), as these are directly influenced by production levels and can be controlled at the operational level. These are typically managed by top-level executives and are treated as "period costs," meaning they don't distract lower-level managers from their primary efficiency goals.

4. Fixation of Selling Price

Knowing the marginal cost (the minimum extra cost to produce one item) is critical for pricing strategies. A company's ideal selling

price will cover both variable and fixed costs, plus a profit margin. However, in aggressive competition, a company might need to temporarily sell at a "special price." Marginal costing tells them the absolute minimum price they can charge without incurring a cash loss on that individual sale.

5. Preparing Tenders and Quotations

When a business submits a "tender" (a formal offer to provide goods or services at a set price), it must balance being competitive with being profitable. The marginal cost serves as the essential "floor price"—the minimum bid. Any quote above this floor price adds a "contribution" that helps cover overall fixed costs, meaning the business is better off accepting the order than not.

6. "Make or Buy" Decisions

Companies often face a dilemma: should they manufacture a needed component in-house or purchase it from an external supplier? Marginal costing provides the correct data for this. Manager can compare the *additional variable cost* of making it (materials, labour, variable power) against the supplier's price. A manager can make a financially sound decision based on this precise comparison.

7. Helpful in Budgetary Control

In today's dynamic business world, static budgets are less useful. Marginal costing enables the creation of flexible budgets. These budgets adjust to show what costs *should* be at different levels of activity (e.g., at 60%, 80%, or 100% capacity), which makes them much more practical and accurate for controlling and evaluating performance.

8. Better and Clearer Presentation

Management executives are not always trained accountants. Marginal costing's focus on contribution (Sales minus Variable Cost) and its use of visual tools like break-even charts make it much easier to understand. The visual presentation clearly shows how costs, revenue, and profits interact at various levels of output, allowing non-financial managers to quickly grasp complex financial relationships.

9. Useful in Depression

During depression selling price will have to be reduced in order to maintain sales. Selling price may be reduced below the total cost. But if selling price is more than marginal cost, company should continue the production.

10. Relation between Volume and Profit

Marginal Costing is useful to show the effect of change in output to profit. It means it measures the relationship between Volume and Profit with the help of P/V ratio calculation. Moreover, calculation of breakeven point, margin of safety and charts of them are useful for decision making.

2.5) Absorption Costing and Marginal Costing

Absorption costing is the practice of charging all costs. Both fixed and variable to operations process or products. In marginal costing, only variable costs are charged to production.

The Institute of Cost and Management Accountants define it as "the practice of charging all costs, both variable and fixed to operations, processes or products."

2.6) Difference between Absorption Costing and Marginal Costing

Sr. No.	Absorption Costing	Marginal Costing
1. Treatment of Fixed and Variable Cost	All Costs (Fixed and Variable Costs) are charged to products.	Only Variable Costs are charged to products
2. Valuation of Inventory	Inventory is valued at Full Production Cost (Variable costs + a share of Fixed overheads). This means some of the current period's fixed costs are "carried forward" in the value of unsold stock to the next period.	Inventory is valued only at Variable Cost. No fixed costs are included in the stock value.
3. Measurement of Profit	Relative Profitability is judged by profit figures which is also guiding factors for managerial decisions.	Relative profitability of products or departments is based on a study of relative contribution made by respective products or departments

4.	Impact on Profit	When Production is more than sales, Absorption costing shows a higher profit because some fixed costs are trapped in the closing stock.	When Sales is more than Production, Marginal costing shows a higher profit because the fixed costs trapped in the opening stock (under absorption) are now being charged against sales.
5.	Focus and Presentation	It follows a functional classification. It calculates Gross Profit (Sales - Cost of Goods Sold) and then subtracts selling and administrative expenses.	It follows a behaviour-based classification. It calculates Contribution (Sales - Variable Costs) before subtracting total fixed costs to find the net profit.
6.	Cost volume profit relationship	It does not reveal the cost volume profit relationship.	Cost volume profit relationship is an important part of marginal costing.
7.	Calculation of Unit Cost	In Absorption Costing, the cost per unit is not fixed; it fluctuates based on the volume of production. If you produce more units, the fixed cost per unit decreases, making the product appear "cheaper."	In Marginal Costing, the unit cost remains constant because it only includes variable expenses. This makes marginal costing more reliable for comparing performance across different months or production cycles.

8.	External vs. Internal Reporting	From a regulatory standpoint, Absorption Costing is the "official" method. It is mandatory for preparing statutory financial statements (Profit & Loss Account and Balance Sheet) for shareholders, tax authorities, and auditors, as it follows Indian Accounting Standards (AS-2).	Marginal Costing, however, is strictly an internal managerial tool. It is used by CEOs and department heads to plan for the future, set prices, and make tactical decisions.
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2.7) Terms Relating to Marginal Costing:

(Cost Volume Profit Analysis)

- (1) Statement of Profitability under Marginal Cost:

Particulars	Per unit	Total Amount
Selling Price (a)	_____	_____
-Variable Cost:		
(1) Direct Material	_____	_____
(2) Direct Labor or wages		
(3) Other Variable O/h		
Total Variable Cost (b)	_____	_____
Contribution (c)	_____	_____
-Fixed Cost		_____
Profit / Loss		

When two or more products are manufactured fixed cost is deducted only one time from total contribution of all products and overall profit is determined.

- (2) Total Cost:

$$\text{Total Cost} = \text{Fixed cost} + \text{Variable Cost.}$$

$$\text{Total Cost} = \text{Total Revenue (Sales)} = \text{Break Even Point.}$$

Hence, $BEP = \text{Fixed Cost} + \text{Variable Cost}$

$\text{Sales} = F.C. + V.C. + \text{Profit (or - loss)}$

$\text{Sales} - \text{Variable cost} = \text{Fixed cost} + \text{Profit}$

Or

$\text{Sales} - \text{Variable cost} = \text{Fixed cost} - \text{Loss}$

- (3) **Contribution:** The difference between sales price and marginal cost is termed as contribution.

$\text{Contribution} = \text{Sales} - V.C.$

$\text{Contribution} = \text{Fixed cost} + \text{Profit (Or Fixed cost} - \text{Loss)}$

In short, period fixed cost remains constant and it suggests that more contribution more profit. If any of products carries negative contribution, it must be dropped out from product line to avoid the loss.

- (4) **Profit:** The excess of contribution over fixed cost will be the profit.

$\text{Profit} = C - F.C.$

$P = S - T.C.$

$P = S - V.C. - F.C.$

Profit can be maximized through the following actions,

- ✓ Increase in selling price per unit.
- ✓ Increase in sale of quantity of product.
- ✓ Decreasing per unit variable cost or marginal cost.

- (5) **Break Even Analysis: (CVP)**

- **Break Even Point:** it is the volume of output at which there is no profit no loss is incurred. This is the point where contribution covers the fixed cost.

$\text{Contribution} = \text{Fixed cost}$

BEP expressed in two ways.

- (1) BEP in Units and (2) BEP in Rupees (Sales at BEP)

- **Methods of determining Break Even Point:**

- (A) **Equation Method:** BEP can be determined by algebraic method by following equation.

$\text{Sales at BEP (RS)} = \text{Variable Cost} + \text{Fixed Cost.}$

$\text{BEP (Units)} = \text{BEP in Rs.} \div \text{Selling Price}$

(B) Formula Method or Contribution Margin Method: In this method BEP is determined with the help of Contribution.

$$\text{BEP (units)} = \frac{\text{Total Fixed Cost}}{\text{Contribution per Unit}}$$

$$\text{BEP (Rs)} = \frac{\text{Total Fixed Cost}}{1 - V / S}$$

OR

$$\text{BEP (Rs)} = \frac{\text{Total Fixed Cost}}{P / V \text{ Ratio}}$$

(C) Graphic Method: Under this method, a graph is drawn, in which sales volume (in units) is shown on x axis and the value in rupees is shown on y-axis. Three lines are drawn in this graph. Fixed cost line, total cost line and sales line. The point where total cost line and sales line intersect each other is the breakeven point.

- Utility/ Advantages/ Importance of Break-Even Analysis:
 - (1) To find out the sales required to earn desired profit which necessary for reasonable return on investment.
 - (2) To fix up the selling price which reached to Break even point. And selling price can be increased to earn profit
 - (3) To determine v.c. per unit with the help of break-even charts.
 - (4) To determine the cost and revenue at different level of output. And then it can be compared before sales manager to take decision.
 - (6) **Margin of Safety:** Margin of safety is important concept in marginal costing approach. The difference between the actual sales and sales at breakeven point is known as margin of safety. The margin of safety refers to the amount by which sales revenue can fall before the loss is incurred.

If margin of safety is large, it is a sign of soundness of business and vice versa. The MOS is served as a reliable indicator for the strength of business.

Margin of safety can be increased by following ways.

- Decrease in Fixed cost
- Decrease in Variable cost

- Increase the selling price
- Increase the output and sales
- Changing to a product mix which maximizes p/v ratio and profit.

MOS is calculated in two ways.

(1) In Absolute (Rupees)

MOS = Actual Sales – Sales at BEP

(2) In Percentage (% of Sales)

$$\text{MOS} = \frac{\text{Amount of MOS} \times 100}{\text{Total Sales}}$$

(7) P/V Ratio (Profit Volume Ratio): or C/S Ratio (Contribution to Sales Ratio)

Profit volume ratio which is popularly known as P/V ratio expresses the relationship of contribution to sales. This ratio is expressed in percentage form. High Rate means high Profit.

$$\text{P/V Ratio} = \frac{\text{Contribution} \times 100}{\text{Sales}}$$

$$\text{P/V Ratio} = \frac{S - V}{S} \times 100$$

The profit of the company is increased by improving the P/V ratio.

Management may improve the ratio by following ways.

- By increasing selling price per unit.
- By decreasing variable cost
- By increasing level of output which have high p/v ratio.

P/V ratio is important in decision making for calculation of BEP, Desired Profit or Required sales amount.

$$\text{Required Sales} = \frac{\text{Fixed cost} + \text{Desired Profit}}{\text{P/V Ratio}}$$

$$\text{Variable Cost} = \text{Sales} \times (1 - \text{p/v ratio})$$

$$\text{Contribution} = \text{Sales} \times \text{P/V ratio.}$$

SOLVED EXAMPLES OF BREAK EVEN ANALYSIS

1. From the following information, find out the amount of profit earned during the year using marginal costing techniques:

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Fixed Cost: Rs. 500,000

Variable Cost: Rs. 10 Per Unit

Selling Price: Rs. 15 Per Unit

Output Level: 150,000 Units

Solution:

$$\begin{aligned}\text{Contribution} &= \text{Sales} - \text{Variable Cost} \\ &= (15 \times 150,000) - (10 \times 150,000) \\ &= 22,50,000 - 15,00,000 \\ &= \text{Rs. } 7,50,000\end{aligned}$$

Contribution = Fixed Cost + Profit

$$\text{Rs. } 7,50,000 = 500,000 + \text{Profit}$$

$$\text{Profit} = 750,000 - 500,000$$

Profit = Rs. 2,50,000

2. Fixed Cost = Rs. 6,00,000, Selling price = Rs. 150 per unit, Variable cost per unit = Rs. 90. Find out Break-even point in rupees.

Solution:

$$\text{Break -even Point} = \frac{\text{Fixed Cost}}{\text{Contribution per Unit}}$$

$$= \frac{\text{Rs. } 6,00,000}{150 - 90}$$

$$= 10,000 \text{ Units}$$

$$\text{BEP (Rupees)} = 10,000 \text{ Units} \times 150$$

$$= \text{Rs. } 15,00,000$$

3. Sales = 4,000 Units @ Rs. 10 Per Unit
Break-even Point = 1,500 units
Fixed Cost = Rs. 3,000

Calculate amount of Variable cost and Profit.

Solution:

$$\text{Break -even Point} = \frac{\text{Fixed Cost}}{\text{Contribution per Unit}}$$

$$1500 = 3,000 / C$$

$$C = 3000 / 1500$$

$$C = \text{Rs. } 2$$

$$\begin{aligned}\text{Variable Cost} &= \text{Selling Price} - \text{Contribution} \\ &= 10 - 2\end{aligned}$$

$$\text{Variable Cost} = \text{Rs. } 8 \text{ Per Unit}$$

$$\begin{aligned}\text{Profit} &= \text{Contribution} - \text{Fixed Cost} \\ &= (2 \times 4000) - 3000 \\ &= 8000 - 3000\end{aligned}$$

$$\text{Profit} = \text{Rs. } 5000.$$

4. From the following details find out (a) Profit Volume Ratio, (b) B.E. P., (c) Margin of Safety.

Sales - Rs. 100,000

Total Cost - Rs. 80,000

Fixed Cost - Rs. 20,000

Net Profit - Rs. 20,000

Solution:

$$\text{Variable Cost} = \text{Total Cost} - \text{Fixed Cost} = 80,000 - 20,000 = \text{Rs. } 60,000$$

$$\begin{aligned}\text{(a) P/V Ratio} &= \frac{\text{Sales} - \text{Variable Cost}}{\text{Sales}} \times 100 \\ &= \frac{100,000 - 60,000}{100,000} \times 100 \\ &= 40\%\end{aligned}$$

$$\begin{aligned}\text{(b) B.E.P.} &= \frac{\text{Fixed Cost}}{\text{P/V Ratio}} \\ &= \frac{20,000}{40} \times 100 \\ &= \text{Rs. } 50,000\end{aligned}$$

$$\begin{aligned}\text{(c) Margin of Safety} &= \frac{\text{Profit}}{\text{P/V Ratio}} \\ &= \frac{20,000}{40} \times 100 \\ &= \text{Rs. } 50,000\end{aligned}$$

Or

$$\begin{aligned}\text{Margin of Safety} &= \text{Actual Sales} - \text{Sales at BEP} \\ &= 100,000 - 50,000 = \text{Rs. } 50,000\end{aligned}$$

5. The P/V ratio of company is 50% and the margin of safety is 40%. Find out the Break-even point and net profit if the sales volume is Rs. 50,00,000.

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Solution:

Margin of Safety (%) = $\text{MOS} / \text{Total Sales} \times 100 = \text{Profit} / \text{P/V Ratio}$

$$40\% = \text{MOS} / 50,00,000 \times 100$$

$$\text{MOS Rs.} = 40 \times 50,00,000 / 100$$

$$\text{MOS} = \text{Rs. } 20,00,000$$

$$\text{MOS} = \text{Actual Sales} - \text{BEP sales}$$

$$20,00,000 = 50,00,000 - \text{BEP sales}$$

$$\text{BEP} = \text{Rs. } 30,00,000$$

$$\text{P/V Ratio} = \text{Sales} - \text{Variable Cost} / \text{Sales} \times 100$$

$$50\% = 50,00,000 - \text{VC} / 50,00,000$$

$$50 \times 50,00,000 / 100 = 50,00,000 - \text{VC}$$

$$\text{VC} = 50,00,000 - 25,00,000$$

$$\text{VC} = \text{Rs. } 25,00,000$$

$$\text{BEP} = \text{FC} \times \text{Sales} / \text{S} - \text{V}$$

$$30,00,000 = \text{FC} \times 50,00,000 / 25,00,000$$

$$\text{FC} = 30,00,000 \times 25,00,000 / 50,00,000$$

$$\text{FC} = \text{Rs. } 15,00,000$$

$$\text{Contribution} = \text{Fixed Cost} + \text{Profit}$$

$$25,00,000 = 15,00,000 + \text{Profit}$$

$$\text{Profit} = 25,00,000 - 15,00,000$$

$$\text{Profit} = \text{Rs. } 10,00,000$$

6. Webline company provided following details:

Year	Sales (Rs.)	Profit (Rs.)
2025	1,00,000	10,000
2026	1,20,000	14,000

Calculate:

(1) Profit Volume Ratio

(2) Break Even point

(3) Amount of Profit when Sales is Rs. 2,00,000

(4) Margin of Safety (MOS) for the year 2026

Solution:

$$(1) \quad P/V \text{ Ratio} = \frac{\text{Change in Profit}}{\text{Change in Sales}} \times 100$$

$$= \frac{(14000 - 10000)}{(120,000 - 100,000)} \times 100$$

$$= \frac{4000}{20,000} \times 100$$

$$= 20\%$$

$$\text{Contribution} = \text{Sales} \times P/V \text{ ratio} = 120,000 \times 20\% = \text{Rs. } 24,000$$

$$\text{Contribution} = \text{Fixed Cost} + \text{Profit}$$

$$24,000 = \text{F.C.} + 14,000 = \text{Rs. } 24,000 - 14,000$$

$$\text{Fixed Cost} = \text{Rs. } 10,000$$

$$(2) \quad \text{Break-even Point} = \frac{\text{FC}}{P/V \text{ Ratio}}$$

$$= \frac{10,000}{20\%}$$

$$= \text{Rs. } 50,000$$

$$(3) \quad \text{Profit when sales are Rs. } 200,000$$

$$\text{Contribution} = \text{Sales} \times P/V \text{ Ratio}$$

$$= 200,000 \times 20\%$$

$$= \text{Rs. } 40,000$$

$$\text{Profit} = \text{Contribution} - \text{FC}$$

$$= 40,000 - 10,000$$

$$= \text{Rs. } 30,000$$

$$(4) \quad \text{Margin of Safety (MOS) for the year 2026.}$$

$$\text{MOS} = \frac{\text{Profit}}{P/V \text{ ratio}}$$

$$= \frac{14,000}{20\%}$$

$$= \text{Rs. } 70,000$$

- 7, VBL ltd is providing details regarding cost as follow: Variable cost per unit Rs. 18, Fixed Cost Rs. 60,000, Selling price per unit Rs. 30.

Calculate: (1) Profit Volume Ratio (2) BEP in units (3) BEP in rupees (4) Amount of Margin of Safety when sales are 8000 units (5) Profit when sales are 7000 units (6) Sales units when desired profit is Rs. 36000 (7) If selling price is reduced by 20%, new breakeven point.

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Solution:

$$(1) \quad \text{P/V Ratio} = \frac{\text{Sales} - \text{Variable Cost}}{\text{Sales}} \times 100 \\ = \frac{30 - 18}{30} \times 100 \\ = 40\%$$

$$(2) \quad \text{BEP Units} = \frac{\text{FC}}{\text{S} - \text{V}} \\ = \frac{60,000}{12} \\ = 5000 \text{ Units}$$

$$(3) \quad \text{BEP Rupees} = \frac{\text{FC}}{\text{P/V ratio}} \\ = \frac{60,000}{0.4} \\ = \text{Rs. } 1,50,000.$$

$$(4) \quad \text{Margin of Safety} = \text{Actual Sales} - \text{BEP sales} \\ = 8000 \text{ units} - 5000 \text{ units} \\ = 3000 \text{ Units}$$

$$\text{MOS Rupees} = 3000 \text{ units} \times 30 = \text{Rs. } 90,000$$

$$(5) \quad \text{Profit when sales are 7000 units} \\ \text{Sales} - \text{Variable Cost} = \text{Fixed Cost} + \text{Profit} \\ (30 - 18) \times 7000 = 60,000 + \text{Profit} \\ 12 \times 7000 = 60,000 + \text{Profit} \\ \text{Profit} = 84000 - 60000 = \text{Rs. } 24000$$

$$(6) \quad \text{Sales units when desired profit is Rs. } 36000 \\ \text{Sales} - \text{Variable Cost} = \text{Fixed Cost} + \text{Profit} \\ (30 - 18) \times \text{Sales Units} = 60,000 + 36,000 \\ \text{Sales Units} = \frac{60,000 + 36,000}{12} = 8000 \text{ units}$$

$$(7) \quad \text{If selling price is reduced by 20\%, new breakeven point} \\ \text{New SP} = 30 - 20\% = 24 \\ \text{New BEP} = \frac{\text{FC}}{\text{S} - \text{V}} \\ = \frac{60,000}{24 - 18} \\ = 10,000 \text{ units}$$

$$\text{New BEP Rupees} = 10,000 \text{ units} \times 24 = \text{Rs. } 2,40,000$$

8. ABDL ltd is providing you following details related to cost:

Sales units = 15,000, Fixed expenses = Rs. 34,000, Sales Value = 1,50,000, Variable cost per unit = Rs. 6

Calculate: (1) P/V Ratio (2) BEP (3) MOS (4) Profit when Sales units 20,000 (5) Sales when Profit 36000 (6) New BEP when selling price is increased by 20% (7) New MOS when Fixed cost increased to 40,000.

Solution:

Selling Price = $150,000 / 15,000 = 10$ per unit,

Variable Cost = 6 per unit,

FC = 34,000

(1) $P/V \text{ Ratio} = \text{Sales} - \text{Variable Cost} / \text{Sales} \times 100$

$$= 10 - 6 / 10 \times 100$$

$$= 40\%$$

(2) $\text{BEP Rupees} = \text{Fixed Cost} / P/V \text{ Ratio}$

$$= 34,000 / 40\%$$

$$= \text{Rs. } 85,000.$$

(3) $\text{Margin of Safety} = \text{Actual Sales} - \text{BEP sales}$

$$= 150,000 - 85,000$$

$$= \text{Rs. } 75,000$$

(4) $\text{Profit when sales Units } 20,000$

$$\text{Sales} - \text{Variable Cost} = \text{Fixed Cost} + \text{Profit}$$

$$(10 - 6) \times 20,000 = 34,000 + \text{Profit}$$

$$4 \times 20,000 = 34,000 + \text{Profit}$$

$$\text{Profit} = 80,000 - 34,000 = \text{Rs. } 46,000$$

(5) $\text{Sales when Profit } 36000$

$$\text{Sales} - \text{Variable Cost} = \text{Fixed Cost} + \text{Profit}$$

$$(10 - 6) = 34,000 + 36,000$$

$$\text{Sales Unit} = 70,000 / 4 = 17,500 \text{ Units}$$

$$\text{Sales Rupees} = 17,500 \times 10 = \text{Rs. } 175,000$$

(6) $\text{New Selling Price} = 10 + 20\% = \text{Rs. } 12 \text{ Per unit,}$

$$\text{New } P/V \text{ Ratio} = \text{Contribution} / \text{Sale Price}$$

$$= 6 / 12 \times 100$$

$$= 50\%.$$

$\text{New BEP} = \text{Fixed Cost} / \text{New } P/V \text{ Ratio}$

$$= 34,000 / 0.5$$

$$= \text{Rs. } 68,000$$

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(7) New MOS when Fixed cost increased to 40,000.

$$\text{New BEP} = \text{Fixed Cost} / S - V$$

$$= 40000 / (10 - 6)$$

$$= 40,000 / 4$$

$$= 10,000 \text{ Units}$$

$$\text{New BEP Rupees} = 10,000 \times 10 = 100,000$$

$$\text{New MOS} = \text{Actual Sales} - \text{BEP sales}$$

$$= 150,000 - 100,000$$

$$= \text{Rs. } 50,000$$

9. From the following find out:

a. Profit Volume Ratio

b. Break-even Point

c. Sales for 40% P/V Ratio

d. Margin of Safety from the sales Rs. 300,000

e. Net Profit from the sales of Rs. 300,000

f. Required sales for the Net Profit of Rs. 70,000

Position of the RRK for the year 2026:

Sales Rs. 200,000

Variable Expenses Rs. 150,000

Contribution Rs. 50,000

Fixed Cost Rs. 15,000

Net Profit Rs. 35,000

Solution:

a. Profit Volume Ratio = $S - V / S \times 100$

$$= 200,000 - 150,000 / 200,000 \times 100$$

$$= 25\%$$

b. Break-even Point = $\text{Fixed Cost} / \text{P/V Ratio}$

$$= 200,000 / 25\%$$

$$= \text{Rs. } 60,000$$

c. Sales for 40% P/V ratio = $\text{Total Contribution} / \text{New P/V Ratio}$

$$= 50,000 / 40\%$$

$$= \text{Rs. } 125,000$$



- d. Margin of Safety from the sales Rs. 300,000

$$\text{MOS} = \text{Actual Sales} - \text{BEP Sales}$$

$$= 300,000 - 60,000$$

$$= \text{Rs. } 240,000$$

- e. Net Profit from the sales of Rs. 300,000

$$\text{Net Profit} = \text{Sales} \times \text{P/V ratio} - \text{FC}$$

$$= 300,000 \times 25\% - 15,000$$

$$= 75,000 - 15,000$$

$$\text{Net Profit} = \text{Rs. } 60,000$$

- f. Required sales for the Net Profit of Rs. 70,000

$$\text{Required Sales} = \frac{\text{FC} + \text{Profit}}{\text{P/V Ratio}}$$

$$\text{P/V Ratio}$$

$$= \frac{15,000 + 70,000}{25\%}$$

$$= \text{Rs. } 3,40,000$$

10. The following is the information is EFC Ltd:

Year	Sales	Profit
2025	1,00,000	10,000
2026	1,20,000	14,000

Calculate: (1) P/V Ratio (2) Fixed Cost (3) Break Even Point (4) Profit when sales are Rs. 90,000 (5) Sales to earn profit is Rs. 20,000 (6) Margin of safety for the year 2026 (7) Variable cost for the year 2025.

Solution:

- (1) Profit Volume Ratio = Change in Profit / Change in sales * 100

$$= (14000 - 10000) / (120000 - 100000) \times 100$$

$$= 4000 / 20,000 \times 100 = 20\%$$

- (2) Sales = Fixed Cost + Profit / P/V Ratio

$$1,20,000 = \text{FC} + 14,000 / 0.2$$

$$24000 = \text{FC} + 14000$$

$$\text{Fixed Cost} = 10,000$$

- (3) Break-even Point = Fixed Cost / P/V ratio

$$= 10,000 / 0.2$$

$$= \text{Rs } 50,000$$

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- (4) Profit when sales are Rs. 90,000
Sales = Fixed Cost + Profit / P/V ratio
 $90,000 = 10,000 + \text{Profit} / 0.2$
 $90,000 \times 0.2 = 10,000 + \text{Profit}$
 $\text{Profit} = 18,000 - 10,000 = \text{Rs. } 8000$
- (5) Sales to earn profit is Rs. 20,000
Sales = Fixed Cost + Profit / P/V ratio
 $\text{Sales} = 10,000 + 20,000 / 0.2 = \text{Rs. } 1,50,000$
- (6) MOS (2026) = Actual Sales - BEP Sales
 $= 1,20,000 - 50,000$
 $= \text{Rs. } 70,000$
- (6) Variable cost for the year 2025
Contribution = Sales $\times$ P/V ratio = $100,000 \times 20\% = \text{Rs. } 20,000$
Contribution = Sales - Variable Cost
 $20,000 = 100,000 - \text{VC}$
Variable Cost = $\text{Rs. } 100,000 - 20,000$
 $= \text{Rs. } 80,000$

2.8) Introduction of Budgetary Control

Budgetary control is an important managerial technique used for planning, coordinating, and controlling the financial activities of an organization. It involves preparing budgets for different departments and comparing actual performance with budgeted performance to identify deviations. This system helps management in controlling costs, improving efficiency, and achieving organizational goals effectively. Budgetary control also ensures proper utilization of resources and helps businesses avoid unnecessary expenditures.

In the modern corporate sector, budgetary control plays a vital role in decision-making and strategic planning. Large companies, multinational corporations, manufacturing industries, banks, hospitals, educational institutions, and IT companies use budgetary control for financial management and performance evaluation. In today's competitive and uncertain business environment, organizations use budgetary control for cost reduction, profit planning, risk management, cash flow management, and achieving sustainability goals. With the growth of digital accounting systems

and ERP software, budgetary control has become more accurate, faster, and data-driven in current business practices.

2.9) Definitions of Budgetary Control

According to J. Batty,

“Budgetary control is a system which uses budgets as a means of planning and controlling all aspects of producing and/or selling commodities and services.”

According to Institute of Cost and Management Accountants (ICMA),

“Budgetary control is the establishment of budgets relating to the responsibilities of executives to the requirements of a policy and the continuous comparison of actual with budgeted results.”

According to Weldon,

“Budgetary control is planning in advance of the various functions of a business so that the business as a whole can be controlled.”

According to Brown and Howard,

“Budgetary control is a system of controlling costs which includes the preparation of budgets, coordinating the departments, and establishing responsibilities.”

Simple Definition:

“Budgetary control is the process of preparing budgets and comparing actual results with budgeted figures to control business activities effectively.”

2.10) Importance of Budgetary Control

Budgetary control is an important technique of management used for planning and controlling business activities. It helps management compare actual performance with planned targets and take corrective actions whenever necessary. It improves financial discipline and ensures efficient utilization of resources. The importance of budgetary control is explained below:

1. Proper Planning of Business Activities

Budgetary control helps an organization plan its future activities in a systematic manner. Before starting any business operation, management prepares budgets related to sales, production, purchase, labor, and expenses. Proper planning reduces uncertainty and helps the business achieve its objectives smoothly. It also helps management estimate future income and expenditure in advance.

Example: A manufacturing company prepares a production budget according to expected customer demand for the next year.

2. Effective Control Over Costs

One of the major objectives of budgetary control is cost control. Budgets set limits for expenditure, and management continuously compares actual expenses with budgeted expenses. If unnecessary expenses increase, corrective actions can be taken immediately. This helps reduce wastage and improve efficiency.

Example: A company may fix a monthly budget for electricity, transportation, and maintenance expenses to avoid overspending.

3. Better Coordination Among Departments

Budgetary control creates coordination among different departments such as production, sales, finance, purchase, and marketing. Each department prepares its budget according to the overall organizational objectives. This coordination helps avoid confusion and improves teamwork within the organization.

Example: The production department prepares goods according to the sales budget prepared by the sales department.

4. Measurement and Evaluation of Performance

Budgetary control helps management measure the performance of departments and employees by comparing actual results with budgeted targets. Variations are identified and analyzed to determine the causes of inefficiency. It helps management improve future performance.

Example: If the actual sales of a company are lower than the budgeted sales, management can identify the reasons and improve advertising or marketing policies.

5. Optimum Utilization of Resources

Every organization has limited resources such as money, labor, machines, and materials. Budgetary control ensures that these resources are used efficiently and economically. Proper allocation of resources helps increase productivity and reduce wastage.

Example: A factory may allocate raw materials according to production targets to avoid excess inventory and wastage.

6. Helps in Managerial Decision-Making

Budgetary control provides important financial information to management for making business decisions. Management can use budget reports to decide about expansion, pricing, investment,

production levels, and cost reduction strategies. Decisions become more scientific and accurate.

Example: A company may decide to open a new branch after analyzing profit and sales budgets.

7. Increases Profitability of Business

By controlling costs, reducing wastage, and improving efficiency, budgetary control helps increase the profitability of the organization. It also helps management focus on profitable products and activities. Better financial planning leads to long-term growth and stability.

Example: A company can increase profits by reducing unnecessary administrative expenses identified through budgetary control.

8. Motivation and Responsibility of Employees

Budgets provide clear targets for employees and departments. Employees become more responsible and motivated to achieve these targets within the specified time. Budgetary control also helps in fixing responsibility for poor performance.

Example: Sales managers work harder to achieve the sales targets fixed in the sales budget.

9. Proper Cash Flow Management

Budgetary control helps organizations manage cash inflows and outflows effectively through cash budgets. It ensures that sufficient cash is available for daily operations, salary payments, and other expenses. Proper cash management avoids liquidity problems.

Example: A business prepares a cash budget to ensure that enough funds are available to pay suppliers and employees on time.

10. Useful in Modern Corporate Sector

In today's business environment, budgetary control is widely used in large companies, multinational corporations, banks, hospitals, educational institutions, and IT industries. Modern organizations use computerized accounting systems and ERP software for accurate budgeting and financial monitoring. Budgetary control also helps companies face economic uncertainty and market competition effectively.

Example: IT companies use budgetary control software to monitor project costs and employee expenses in real time.

2.1.1) Introduction of Cash Budget

A cash budget is an important part of financial planning. It is prepared to estimate the future cash position of a business. It shows

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the expected cash receipts and cash payments for a specific period such as a month, quarter, or year.

Every business needs sufficient cash to pay wages, purchase materials, pay rent, and meet other daily expenses. A cash budget helps management know whether there will be excess cash or shortage of cash in the future.

Definition of Cash Budget

"A cash budget is a statement showing the estimated cash inflows and cash outflows during a particular period of time."

Simple Meaning

It is a plan prepared in advance to manage cash properly by comparing:

- Cash received (inflows)
- Cash paid (outflows)

Main Purpose

- To maintain adequate cash balance
- To avoid cash shortage
- To plan future payments and receipts
- To control business finances effectively

Formula

Closing Cash Balance = Opening Cash + Cash Receipts - Cash Payments

Format OF Cash Budget

Particulars	January (₹)	February (₹)	March (₹)
Opening Cash Balance	xxx	xxx	xxx
Add: Cash Receipts			
Cash Sales	xxx	xxx	xxx
Collection from Debtors	xxx	xxx	xxx
Other Receipts	xxx	xxx	xxx
Total Cash Receipts	xxx	xxx	xxx
Total Cash Available	xxx	xxx	xxx
Less: Cash Payments			
Payment to Creditors	xxx	xxx	xxx
Wages and Salaries	xxx	xxx	xxx

Rent	xxx	xxx	xxx
Other Expenses	xxx	xxx	xxx
Total Cash Payments	xxx	xxx	xxx
Closing Cash Balance	xxx	xxx	xxx

SOLVED EXAMPLES OF CASH BUDGET

1) A Ltd. provided following details, prepare cash budget for three months ending on 30th June, 2025 from the following:

Month	Sales (₹)	Materials (₹)	Wages (₹)	Overheads (₹)
February	1,40,000	96,000	30,000	17,000
March	1,50,000	90,000	30,000	19,000
April	1,60,000	92,000	32,000	20,000
May	1,70,000	1,00,000	36,000	22,000
June	1,80,000	1,04,000	40,000	23,000

Additional Information:

- Sales are 10% on cash basis.
- 50% of credit sales are collected in the next month of sales and remaining in the second month following sales.
- Credit terms: Creditors for materials = 2 months, Wages = $\frac{1}{4}$ month, overheads = $\frac{1}{2}$ month.
- Cash Balance on 1st April, 2025 is Rs. 60,000.

solution :

Cash Budget of A Ltd.

For the period of April to June, 2025

Particulars	April	May	June
Opening cash balance	60,000	59,500	70,000
Cash receipts:			
1. Cash Sales	16,000	17,000	18,000
2. Collection of Credit Sales	1,30,500	1,39,500	1,48,500
Total Cash Receipts (A)	2,06,500	2,16,000	2,36,500
Cash payment:			
1. Payment to creditors for materials	96,000	90,000	92,000

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2. Payment of wages	31,500	35,000	39,000
3. Payment of overheads	19,500	21,000	22,500
Total Cash payment (B)	1,47,000	1,46,000	1,53,500
Closing cash balance (A-B)	59,500	70,000	83,000

Working notes :

Sales

Month	February	March	April	May	June
Sales	1,40,000	1,50,000	1,60,000	1,70,000	1,80,000
10% cash sales	14,000	15,000	16,000	17,000	18,000
90% credit sales	1,26,000	1,35,000	1,44,000	1,53,000	1,62,000
receipt					
50% next		63000	67500	72000	76500
50% second next			63000	67500	72000
total credit sales receipt	0	63000	130500	139500	148500

Wages : $\frac{1}{4}$ months means $\frac{1}{4}$ of previous month and $\frac{3}{4}$ of current month wages payment

April = $\frac{1}{4}$ of wages of march + $\frac{3}{4}$ of wages of April

$$= \frac{1}{4} * 30000 + \frac{3}{4} * 32000 = 7500 + 24000 = \text{Rs. } 31500$$

2) Prepare a Cash budget From October to December, 2025 of B Ltd. From the following details

Months	Sales	Purchase	Wages	overhead
Aug	3,00,000	1,40,000	40,000	80,000
Sept	4,00,000	2,00,000	50,000	1,10,000
Oct	4,50,000	1,60,000	60,000	1,22,000
Nov	5,00,000	2,40,000	70,000	1,30,000
Dec	6,00,000	3,00,000	80,000	1,50,000

- 1) Opening cash balance is Rs. 1,20,000
- 2) Proportion of cash sales & credit sales 1:4
- 3) 20% of total purchase is cash purchase

- 4) 50% of credit sales are realized in the month of following the sales and 50% in the second month following the sales.
- 5) Sales commission is 2% on total sales is to be paid in the next month of sale.
- 6) Plant amounted Rs. 1,00,000 is due for delivery in October, Payable in Equal Four Instalments from the month of Delivery.
- 7) The credit period allowed by suppliers is 1 month.
- 8) Overhead exp. Include Rs.5,000 as Depreciation per month on fixed assets .
- 9) Time lag in payment of wages is $\frac{1}{2}$ Month & overhead is 1 month

Solution :

Cash Budget of B Ltd.

For the period of Oct to Dec, 2025

Particulars	Oct	Nov	Dec
Opening Bal.	120000	105000	72000
Receipts:			
Cash Sales	90000	100000	120000
Collection from Debtors (credit sales)	280000	340000	380000
Total Receipts (A)	490000	545000	572000
Cash Payments:			
Cash Purchase	32000	48000	60000
Payment to Suppliers	160000	128000	192000
Sales Commission	8000	9000	10000
Instalment	25000	25000	25000
Payment of Overhead	105000	117000	125000
Payment of Wages	55000	65000	75000
Total Payments: (B)	385000	473000	487000
Cl. Balance (A-B)	105000	72000	85000

Working notes :

Sales :

	Aug	Sep	Oct	Nov	dec
Totalsales	3,00,000	4,00,000	4,50,000	5,00,000	6,00,000
Cashsales(1/5)	60000	80000	90000	100000	120000
Creditsales(4/5)	2,40,000	3,20,000	3,60,000	4,00,000	4,80,000
50%monthfollowing sales		120000	160000	180000	200000
50%secondmonth followingsales			120000	160000	180000
total credit sales receipt			280000	340000	380000

Purchase :

	Aug	Sep	Oct	Nov	dec
Totalpurchase	1,40,000	2,00,000	1,60,000	2,40,000	3,00,000
Cashpurchase(20%)	28000	40000	32000	48000	60000
Creditpurchase(80%)	1,12,000	1,60,000	1,28,000	1,92,000	2,40,000
total credit purchase payments		1,12,000	1,60,000	1,28,000	1,92,000

Sales Commission :

Months	Sales	sales commission	sales commission payment
Aug	3,00,000	6000	—
Sept	4,00,000	8000	6000
Oct	4,50,000	9000	8000
Nov	5,00,000	10000	9000
Dec	6,00,000	12000	10000

Wages :

Payment is $\frac{1}{2}$ of previous month and $\frac{1}{2}$ of current year

$$\begin{aligned} \text{October (Wages)} &= \frac{1}{2} \text{ of (September -wage)} + \frac{1}{2} \text{ of (October -wage)} \\ &= \frac{1}{2} * 50000 + \frac{1}{2} * 60000 = 25000 + 30000 = \text{Rs. 55000} \end{aligned}$$

3) Prepare cash budget for three months ended on 31-05-2026 based on following information.

Months	Sales	Materials	Wages	Factory Overheads	Selling Overheads
January	20,000	20,000	4,000	3,200	800
February	22,000	14,000	4,400	3,300	900
March	28,000	14,000	4,600	3,400	900
April	36,000	22,000	4,600	3,500	1,000
May	30,000	20,000	4,000	3,200	900

Additional Information: (1) Cash Balance on 01-03-2026, Rs. 15,000
 (2) Cash Sales is 50%. (2) Time lag in Credit Sales 1 month, Credit Purchase 2 months, Overheads 1 month, Wages $\frac{1}{2}$ month. (3) Sales commission at 5% on total sales and it is paid in following month of actual sales.

Solution :

Particulars	March	April	May
Opening Cash Balance	15,000	10,200	17,900
Cash Receipts			
(1) Cash Sales	14,000	18,000	15,000
(2) Collection from Debtors	11,000	14,000	18,000
Total Cash Receipts (A)	40,000	42,200	50,900
Cash Payments:			
(1) Payment to Creditors	20,000	14,000	14,000
(2) Payment of Wages	4,500	4,600	4,300
(3) Payment of Factory O/h	3,300	3,400	3,500
(4) Payment of Selling o/h	900	900	1000
(5) Commission on Sales	1,100	1,400	1,800
Total Cash Payments (B)	29,800	24,300	24,600
Closing Cash Balance (A-B)	10,200	17,900	26,300

Working Notes : Sales :

Months	January	February	March	April	May
Sales	20,000	22,000	28,000	36,000	30,000
50% cash sales	10000	11000	14000	18000	15000
50% credit sales	10,000	11,000	14,000	18,000	15,000
receipt of credit sales					
1 month			11,000	14,000	18,000

4) Prepare cash budget for three months ended on 31-03-2026. Opening cash balance on 01-01-2026 is 1,00,000.

Months	Sales	Purchase	Wages
November, 2025	5,00,000	3,00,000	1,00,000
December, 2025	6,00,000	4,00,000	1,25,000
January, 2026	7,00,000	5,00,000	1,50,000
February, 2026	8,00,000	6,00,000	1,75,000
March, 2026	9,00,000	7,00,000	2,00,000

Additional Information: (1) Credit Sales is 60% and it is collected in the month after the sale (2) Credit Purchase is 80%, creditor's payment period is 2 months (3) Wages are paid on $\frac{1}{2}$ month basis (4) Machinery costing Rs. 1,00,000 purchased in the month November, 2025, payment is in equal five instalments from December, 2025 (5) Tax payment is due in the month March, 2026 Rs. 50,000

Solution :

Particulars	January	February	March
Opening Cash Balance	1,00,000	2,42,500	3,60,000
Cash Receipts			
(1) Cash Sales (40%)	2,80,000	3,20,000	3,60,000
(2) Collection from Debtors (60%)	3,60,000	4,20,000	4,80,000
Total Cash Receipts (A)	740000	982500	1200000
Cash Payments			
(1) Cash Purchases (20%)	1,00,000	1,20,000	1,40,000
Payment to Creditors (80%)	2,40,000	3,20,000	4,00,000
(2) Payment of Wages	1,37,500	1,62,500	1,87,500
(3) Payment of Machinery	20,000	20,000	20,000
(4) Payment of taxes	-	-	50,000
Total Cash Payments (B)	4,97,500	6,22,500	7,97,500
Closing Cash Balance (A-B)	242500	360000	402500

Working notes :**Sales :**

Months	November	December	January	February	March,
Sales	5,00,000	6,00,000	7,00,000	8,00,000	9,00,000
40% cash sales	200000	240000	280000	320000	360000
60% credit sales	3,00,000	3,60,000	4,20,000	4,80,000	5,40,000
receipt of credit sales					
next month		3,00,000	3,60,000	4,20,000	4,80,000

5) Prepare a Cash Budget from the data given below for a period of six months (July to December)

Month	Sales	Raw Materials
May	75,000	37,500
June	75,000	37,500
July	1,50,000	52,500
August	2,25,000	3,67,500
September	3,00,000	1,27,500
October	1,50,000	97,500
November	1,50,000	67,500
December	1,37,500	

(2) Collection estimates:

- o Within the month of sale: 5%
- o During the month following the sale: 80%
- o During the second month following the sale: 15%

(3) Payment for raw materials is made in the next month.

(4) Salary Rs. 11,250, Lease payment Rs. 3750, Misc. Exp. Rs. 1150, are paid each month

(5) Monthly Depreciation Rs. 15,000

(6) Income tax Rs. 26,250 each in September and December.

(7) Payment for research in October Rs.75,000

(8) Opening Balance on 1st July Rs.55,000.

Solution

Particulars	July	Aug.	Sep.	October	Nov.	December
Receipts						
Opening Balance	55,000	80,100	1,53,950	-38,450	24,150	83,000
Collection from Debtors	78,750	1,42,500	2,17,500	2,81,250	1,72,500	1,49,375
Total receipts(A)	1,33,750	2,22,600	3,71,450	2,42,800	1,96,650	2,32,375
Payments						
Payment to suppliers	37,500	52,500	3,67,500	1,27,500	97,500	67,500
Salary	11,250	11,250	11,250	11,250	11,250	11,250
Lease payment	3750	3750	3750	3750	3750	3750
Misc. expense	1,150	1,150	1,150	1,150	1,150	1,150
Income tax			26,250			26,250
Payment for Research				75,000		
Total Payment(B)	53,650	68,650	4,09,900	2,18,650	1,13,650	1,09,900
Closing Balance	80,100	1,53,950	-38,450	24,150	83,000	1,22,475

6) **SUMAN Co. Ltd.** wishes to arrange overdraft facilities with its bankers from the period August to October 2026 when it will be manufacturing mostly for stock. Prepare a cash budget for the above period from the following data given below:

Month	Sales (₹)	Purchases (₹)	Wages (₹)	Mfg. Exp. (₹)	Office Exp. (₹)	Selling Exp. (₹)
June	1,80,000	1,24,800	12,000	3,000	2,000	2,000
July	1,92,000	1,44,000	14,000	4,000	1,000	4,000
August	1,08,000	2,43,000	11,000	3,000	1,500	2,000
September	1,74,000	2,46,000	12,000	4,500	2,000	5,000
October	1,26,000	2,68,000	15,000	5,000	2,500	4,000
November	1,40,000	2,80,000	17,000	5,500	3,000	4,500
December	1,60,000	3,00,000	18,000	6,000	3,000	5,000

Additional Information:

- (a) Cash on hand 1-08-2026 Rs.25,000.
- (b) 50% of credit sales are realized in the month following the sale and the remaining 50% in the second month following. Creditors are paid in the month following the month of purchase.
- (c) Lag in payment of manufacturing expenses half month.
- (d) Lag in payment of other expenses one month.

Solution:

CASH BUDGET**For 3 months from August to October 2026**

Particulars	August (₹)	September (₹)	October (₹)
Receipts:			
Opening balance	25,000	44,500	(66,750)
Sales	1,86,000	1,50,000	1,41,000
Total Receipts(A)	2,11,000	1,94,500	74,250
Payments:			
Purchases	1,44,000	2,43,000	2,46,000
Wages	14,000	11,000	12,000
Mfg. Exp.	3,500	3,750	4,750
Office Exp.	1,000	1,500	2,000
Selling Exp.	4,000	2,000	5,000
Total payments(B)	1,66,500	2,61,250	2,69,750
Closing Balance(A-B)	44,500	(66,750)	(1,95,500)

Working Note:

1. Manufacturing Expense:

Particular	August	September	October
July (4000/2)	2000	—	—
August (3000/2)	1500	1500	—
September (4500/2)	—	2250	2250
October (5000/2)	—	—	2500
Total	3500	3750	4750

2. Sales

Particular	August	September	October
June (180000/2)	90000	—	—
July (192000/2)	96000	96000	—
August (108000/2)	—	54000	54000
September (174000/2)	—	—	87000
Total	186000	150000	141000

2.12) Flexible Budget

A flexible budget is a budget that changes according to the level of business activity or production. It is prepared in such a way that budgeted costs and expenses can be adjusted based on actual output or sales volume. Unlike a fixed budget, a flexible budget is not limited to one level of activity and can be revised according to changing business conditions.

Flexible budgeting helps management compare actual performance with budgeted performance more accurately because it considers variations in production, sales, or workload. It is very useful in industries where production levels frequently change due to market demand.

Example:

If a factory prepares a budget for producing 10,000 units but actual production becomes 12,000 units, the flexible budget can be adjusted according to the new production level.

2.13) Definition:

"A flexible budget is a budget which changes according to the level of activity or volume of production."

SOLVED EXAMPLES OF FLEXIBLE BUDGET

1. Prepare a Flexible budget for overheads on the basis of the following data. Ascertain the overhead rates at 50% and 60% capacity.

Variable overheads:	At 60% capacity (Rs)
Indirect Material	6,000
Labour	18,000
Semi-variable overheads:	
Electricity: (40% Fixed & 60% variable)	30,000
Repairs: (80% fixed & 20% Variable)	3,000

Fixed overheads:	
Depreciation	16,500
Insurance	4,500
Salaries	15,000
Total overheads	93,000
Estimated direct labour hours	1,86,000

Solution

Items	Capacity	
	50%	60%
Variable overheads:	(₹)	(₹)
Material	5,000	6,000
Labour	15,000	18,000
Semi-variable		
Electricity	27,000	30,000
Repairs	2,900	3,000
Fixed overheads:		
Depreciation	16,500	16,500
Insurance	4,500	4,500
Salaries	15,000	15,000
Total Overheads	85,900	93,000
Estimated direct labour hours	1,55,000	1,86,000
Overhead Rate	0.55	0.50

Working Notes**Electricity :**

At 50% capacity = $\frac{18,000}{60} \times 50$

= Rs. 15,000

Rs. 12,000 + Rs. 15,000 = Rs. 27,000

60% capacity = Rs. 18,000 + Rs. 12,000 = Rs. 30,000

Repairs

For 60% capacity = Rs. 600

= Rs. 2,400 + Rs. 600 = Rs. 3,000

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At 50% capacity : $= 600/60 * 50$

= RS. 500

=Rs.2400 + 500

=Rs.2,900

2. Prepare a flexible budget for overheads on the basis of the following data. Ascertain the overhead rates at 60% and 70% capacity.

Variable overheads:	At 60% capacity (Rs)
Material	6,000
Labour	18,000
Semi-variable overheads:	
Electricity:	30,000
40% Fixed	
60% variable	
Repairs:	
80% fixed	3,000
20% Variable	3,000
Fixed overheads:	
Depreciation	16,500
Insurance	4,500
Salaries	15,000
Total overheads	93,000
Estimated direct labour hours	1,86,000

Solution:

Working:

Repairs

For 60% capacity Fixed $80/100 * 3,000 = \text{Rs.}2400$

Variable $= 20/100 * 3,000 = \text{Rs.} 600$

=Rs. 2400 + Rs.600 =Rs.3,000

Electricity Exp.:

At 60% capacity Fixed $= 40/100 * 30,000 = 12,000$

Variable $= 60/100 * 30,000 = 18,000$

At 70% capacity:

Fixed $= 40/100 * 30,000 = 12,000$



30,000 = Rs. 12,000

Variable = $18,000 / 60 \times 70 =$

Rs. 21,000 Total Rs.

= 33,000

Flexible Budget

Items	Capacity	
	60%	70%
Variable overheads:	(₹)	(₹)
Material	6,000	7,000
Labour	18,000	21,000
Semi-variable		
Electricity	30,000	33,000
Repairs	3,000	3,100
Fixed overheads:		
Depreciation	16,500	16,500
Insurance	4,500	4,500
Salaries	15,000	15,000
Total Overheads	93,000	1,00,100
Estimated direct labour hours	1,86,000	2,17,000
Overhead Rate	0.50	0.46

3. The expenses budgeted for production of 1,000 units in a factory are furnished below:

Particulars	Per Unit (₹)
Material Cost	700
Labour Cost	250
Variable overheads	200
Selling expenses (20% fixed)	130
Administrative expenses (Rs. 2,00,000)	200
Total Cost	1,480

Prepare a budget for production of 600 units and 800 units assuming administrative expenses are rigid for all level of production.

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Solution

Particulars	For 600 units		For 800 units	
	Per unit (₹)	Total (₹)	Per unit (₹)	Total (₹)
Variable				
Cost:	700	4,20,000	700	5,60,000
Materials	250	1,50,000	250	2,00,000
Cost	200	1,20,000	200	1,60,000
Labour Cost	1,150	6,90,000	1,150	9,20,000
Variable Overheads				
(A)	104	62,400	104	83,200
Semi variable Cost:	43.33	26,000	32.50	26,000
Variable selling				
expenses	147.33	88,400	136.50	1,09,200
Fixed selling expense	333.33	2,00,000	250.00	2,00,000

(B)

Fixed Cost:

Administrative

expenses (C)				
Total Cost(A+B+C)	1,630.66	9,78,400	1,536.50	12,29,200

4. The budgeted output of a industry specializing in the production of a one product at the optimum capacity of 6,400 units per annum amounts to Rs. 1,76,048 as detailed below:

Particulars	(₹)	(₹)
Fixed costs		20,688
Variable costs:		
Power	1,440	
Repairs etc.	1,700	
Miscellaneous	540	
Direct material	49,280	
Direct Labour	1,02,400	1,55,360
Total cost		1,76,048

The company decides to have a flexible budget with a production target of 3,200 and 4,800 units (the actual quantity proposed to be produced being left to a later date before commencement of the budget period)

Prepare a flexible budget for production levels of 50% and 75%. Assuming, selling price per unit is maintained at Rs. 40 as at present, indicate the effect on net profit.

Administrative, selling and distribution expenses continue at Rs.3,600.

Solution:

The production at 100% capacity is 6400 units, so it will be 3,200 units at 50% and 4,800 units at 75% capacity. The variable expenses will change in that proportion.

Flexible Budget

Particulars	100% 6400 unit	75% 4800 unit	50% 3200 units
(i) Sales (per unit Rs.40)	2,56,000	1,92,000	1,28,000
Cost of Sales:			
(a) variable costs:			
Direct material	49,280	36,960	24,640
Direct Labour	1,02,400	76,800	51,200
Power	1,440	1,080	720
Repairs	1,700	1,275	850
Miscellaneous	540	405	270
Total variable costs	1,55,360	1,16,520	77,680
(b) Fixed Costs:			
(ii) Total Costs	1,76,048	1,37,208	98,368
Gross Profit	79,952	54,792	29,632
(i) - (ii)	3,600	3,600	3,600
Less: Adm., selling and Dist. Costs			
Net Profit	76,352	51,192	26,032

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5. A factory engaged in manufacturing plastic buckets is working at 40% capacity and produces 10,000 buckets per month.

The present cost break up for one bucket is as under:

Materials Rs. 10

Labour Rs. 3

Overheads Rs.5 (60% fixed)

The selling price is Rs.20 per bucket. If it is desired to work the factory at 50% capacity the selling price falls by 3%. At 90% capacity the selling price falls by 5% accompanied by a similar fall in the price of material.

You are required to prepare a statement the profit at 50% and 90% capacities and also calculate the break- even points at this capacity production.

Solution

Flexible Budget

Particulars	Capacity		
	40%	50%	90%
Production and sales units	10,000	12,500	22,500
Sales price per unit	20	19.40	19.00
Sales Amount	2,00,000	2,42,500	4,27,500
Marginal Cost:			
Material: Rs.10 per unit (at 90% - Rs.9.50	1,00,000	1,25,000	2,13,750
per unit) Labour	30,000	37,500	67,500
Variable	20,000	25,000	45,000
overhead Total	1,50,000	1,87,500	3,26,250
Contribution	50,000	55,000	1,01,250
Less: Fixed Cost	30,000	30,000	30,000
Profit	20,000	25,000	71,250
Contribution per unit	5	4.40	4.50
BEP (units) (F / C)	6,000	6,818	6,667

6. Prepare Flexible budget for overheads on the basis of following data for 50% and 70% capacity showing total cost and per unit cost and profit of production when selling price per unit is Rs. 33.

Particulars	At 60% capacity
Units of Production	3000 Units
Variable overheads:	
Indirect material	6,000
Indirect labour	18,000
Semi-Variable overheads:	
Electricity (40% Fixed)	30,000
Repairs (20% variable)	3,000
Fixed overheads:	
Depreciation	16,500
Insurance	4,500
Salaries	15,000

Solution

Particulars	60%	Per Unit	50%	Per Unit	70%	Per Unit
Units of Production	3000 units		2500 Units		3500 Units	
(A) Variable Cost						
(1) Indirect Material	6000	2.0	5000	2.00	7000	2.00
(2) Indirect labour	18000	6.0	15000	6.00	21000	6.00
Total VC	24000	8.0	20000	8.00	28000	8.00
(B) Semi-Variable Cost						
(1) Electricity						
Fixed (40%)	12000	4.0	12000	4.80	12000	3.43
Variable (60%)	18000	6.0	15000	6.00	21000	6.00
(2) Repairs						
Fixed (80%)	2400	0.8	2400	0.96	2400	0.69
Variable (20%)	600	0.2	500	0.20	700	0.20
Total Semi-VC	33000	11.0	29900	11.96	36100	10.31
(C) Fixed Cost						

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(1) Depreciation	16500	5.5	16500	6.60	16500	4.71
(2) Insurance	4500	1.5	4500	1.80	4500	1.29
(3) Salaries	15000	5.0	15000	6.00	15000	4.29
Total FC	36000	12.0	36000	14.40	36000	10.29
Total Cost (A+B+C)	93000	31.0	85900	34.36	100100	28.60
Total Sales	99000	33.0	82500	33.00	115500	33.00
Total Profit/Loss	6000	2.0	-3400	-1.36	15400	4.40

7. A factory is producing product "X" and its installed production capacity at 100% is 40,000 units per annum. Estimated cost of production at 40% and at 60% are as follow: Prepare flexible budget at 50% & 75% capacity of production showing total cost and per unit cost of production

Particulars	At 40%	At 60%
Materials	2,00,000	3,00,000
Wages	1,20,000	1,80,000
Direct expenses	80,000	1,20,000
Factory overheads	3,50,000	4,00,000
Administrative overheads	1,00,000	1,00,000
Total Cost	8,50,000	11,00,000
Total Units	16,000 units	24,000 units

Solution

Particulars	50%		75%	
	Total	Per Unit	Total	Per Unit
Units of Production	20,000 Units		30,000 Units	
(A) Variable Cost				
(1) Materials	2,50,000	12.50	3,75,000	12.50
(2) Wages	1,50,000	7.50	2,25,000	7.50
(3) Direct Expenses	1,00,000	5.00	1,50,000	5.00
Total VC	5,00,000	25.00	7,50,000	25.00
(B) Semi-Variable Cost				
(1) Factory overheads				
Fixed	2,50,000	12.50	2,50,000	8.33
Variable	1,25,000	6.25	1,87,500	6.25

Total Semi-VC	3,75,000	18.75	4,37,500	14.58
(C) Fixed Cost				
(1) Administrative o/h	1,00,000	5.00	1,00,000	3.33
Total FC	1,00,000	5.00	1,00,000	3.33
Total Cost (A+B+C)	9,75,000	48.75	12,87,500	42.92

8. **SHOKA ltd manufactures** a single product at 100% level of capacity with 12000 units. Estimated cost at 40% and 60% are as follow. Prepare flexible budget for 50% and 90% of capacity showing total cost and per unit cost of production.

Particulars	At 40%	At 60%
Variable Expenses:		
Materials	2,40,000	3,60,000
Wages	1,44,000	2,16,000
Overheads	84,000	1,26,000
Semi-Variable Expenses:		
Salaries	3,12,000	3,48,000
Production expense	4,20,000	4,80,000
Fixed Expenses:		
Depreciation	80,000	80,000
Advertisement	10,000	10,000

Solution

Particulars	50%	Per Unit	90%	Per Unit
Units of Production	6000 Units		10800 Units	
(A) Variable Cost				
(1) Materials	3,00,000	50.00	5,40,000	50.00
(2) Wages	1,80,000	30.00	3,24,000	30.00
(3) Overheads	1,05,000	17.50	1,89,000	17.50
Total VC	5,85,000	97.50	10,53,000	97.50
(B) Semi-Variable Cost				
(1) Salaries				
Fixed	2,40,000	40.00	2,40,000	22.22
Variable	90,000	15.00	1,62,000	15.00

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(2) Production Expenses				51
Fixed	3,00,000	50.00	3,00,000	
Variable	1,50,000	25.00	2,70,000	27.78
Total Semi-VC	7,80,000	130.00	9,72,000	25.00
(C) Fixed Cost				90.00
(1) Depreciation	80,000	13.33	80,000	
(2) Advertisement	10,000	1.67	10,000	7.41
Total FC	90,000	15.00	90,000	0.93
Total Cost (A+B+C)	14,55,000	242.50	21,15,000	8.33
				195.83

PRACTICE EXAMPLES OF BREAK EVEN POINT

1. Sara Ltd. provided the following information for two periods.

Year	Sales (Rs.)	Profit (Rs.)
2025	15,00,000	2,00,000
2026	20,00,000	3,00,000

Calculate:

- Profit volume ratio
- Fixed cost
- Margin of safety when sales is Rs. 7,00,000.

Ans: 20%, Rs. 100,000, Rs. 200,000

2. Shilpa Madicare ltd is providing following information related to cost.

Sales (1,00,000 units) = Rs. 10,00,000

Variable expenses = Rs. 4,00,000

Fixed expenses = Rs. 6,00,000

Calculate: (1) Profit volume ratio (2) Break-even point (3) Margin of safety at present sales volume (4) New BEP when fixed cost is increased by 10%. (5) Amount of required sales when desired profit is 36,000. (6) Amount of Profit when sales units 1,20,000 (7) New Profit volume ratio when selling price is increase by 20%.

Ans: 60%, Rs. 10,00,000, NIL, Rs. 11,00,000, Rs. 10,60,000, Rs. 1,20,000, 66.67%

3. Pranj Ltd. has provided following details.

Selling price per unit = Rs. 10, Variable Cost per unit = Rs. 6,
Total Fixed Cost = Rs. 10,000.

Calculate:

- (1) BEP in Units
- (2) Sales in units when company wants to earn profit of Rs. 15,000.
- (3) New BEP in Units if Selling price is reduced by 20%

Ans: 2500 units, 6250 units, 5000 units

4. Yatra Ltd. provided the following information.

Selling price = Rs. 100 per unit, Variable cost = Rs. 75 per unit,
Total Fixed cost = Rs. 5,00,000.

Calculate:

- (1) BEP
- (2) Margin of Safety (MOS) when actual sales units = 25,000.
- (3) Amount of profit when actual sales = Rs. 25,00,000.

Ans: Rs. 20,00,000, 5000 units or Rs. 500,000, Rs. 125,000

5. RossTech Ltd. provided following information for two periods.

Year	Total Cost (Rs.)	Profit/ Loss (Rs.)
2022	8,20,000	(20,000) Loss
2023	11,20,000	80,000 Profit

Calculate:

- (1) Profit volume ratio
- (2) BEP
- (3) Margin of safety for the year 2023.

Ans: 20%, Rs. 720,000, Rs. 400,000

6. You are given the following information in respect of a KEI Ltd:

Fixed Cost	Rs. 13,000
Variable Cost	Rs. 14,000
Total Cost	Rs. 27,000
Net Profit	Rs. 3,000
Net Sales	Rs. 30,000

Find out BEP in Rupees.

Calculate Profit for sale volume of Rs. 50,000

Estimate Sales required to earn Profit of Rs. 10,000.

Ans: Rs. 24,375, Rs. 13,667, Rs. 43125.

PRACTICE EXAMPLES OF CASH BUDGET

1. P Ltd. has given the following particulars. Prepare Cash Budget for 3 months ending 31st March, 2026.

Month	Sales (₹)	Materials (₹)	Wages (₹)	O/H (₹)
November	50,000	24,000	8,000	4,000
December	54,000	25,000	8,400	4,400
January	58,000	26,000	9,000	4,800
February	62,000	27,000	9,400	5,000
March	70,000	28,000	10,000	5,400

Additional Information:

1. 20% sales are cash sales.
Out of credit sales, 60% are collected in next month and balance in second month.
2. Payment to creditors for materials is made after 2 months.
3. Wages are paid after 1 month.
4. Overheads are paid after half month.
5. Cash balance on 1st January, 2026 is Rs. 10,000.
6. Machinery purchased in December 2025 costing Rs. 1,20,000. Monthly installment of Rs. 6,000 payable from January 2026.
7. Dividend of 12% on preference share capital of Rs. 2,50,000 will be paid on 1st March 2026.
8. Advance from customer Rs. 25,000 will be received in February 2026.
9. Income tax of Rs. 8,000 payable in March 2026.
2. Prepare a Cash budget From Oct to Dec, 2026 of B Ltd. From the following details

Months	Sales	Purchase	Wages	overhead
Aug	3,00,000	1,40,000	40,000	80,000
Sept	4,00,000	2,00,000	50,000	1,10,000
Oct	4,50,000	1,60,000	60,000	1,22,000
Nov	5,00,000	2,40,000	70,000	1,30,000
Dec	6,00,000	3,00,000	80,000	1,50,000

1. Opening cash balance is Rs. 1,20,000
2. Proportion of cash sales & credit sales 1:4

3. 20% of total purchase is cash purchase
4. 50% of credit sales are realized in the month of following the sales and 50% in the second month following the sales.
5. Sales commission is 2% on total sales is to be paid in the next month of sale.
6. Plant amounted Rs. 1,00,000 is due for delivery in October, Payable in Equal Four Installments from the month of Delivery.
7. The credit period allowed by suppliers is 1 month.
8. Overhead exp. Include Rs.5,000 as Depreciation per month on fixed assets .
9. Time lag in payment of wages is $\frac{1}{2}$ Month & overhead is 1 month
3. **C Ltd.** from the following information , prepare cash budget for the period of 1 st January to 31st june , 2026. when opening balance is accepted to Rs. 10,000.

Month	Sales	Material	Wages	Production	Distribution
Jan	20,000	20000	4000	3200	8000
Feb	22000	14000	4400	3300	9000
March	28000	14000	4600	3400	9000
April	36000	22000	4600	3500	1000
May	30000	20000	4000	3200	9000
June	40000	25000	5000	3600	12000

Additional Information:-

1. Cash balance 1st jan 10,000
2. New machinery is to be installed at Rs. 20,000 on credit to be repaid by to equal installment in march and April
3. Sales commission at 5% on total sales each to be paid a month of following actual sales.
4. Rs.10,000 being amount of the 2nd call may be received in march share permission in amount Rs. 2000 is also obtainable with 2nd call.
5. Period of credit allowed by supplier 2 month.
6. Period of credit allowed by customer 1 month.
7. Delay in payment of wages $\frac{1}{2}$ month.

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8. Delay in payment of production & selling distribution of 1 month..
4. **D Ltd.** on the basis of following information, prepare a cash budget for D Ltd. For six months from July to December 2025
- 1) Credit sales are 70% & cash sales 30% of total sales.
 - 2) 50% credit sales are collected in the month after sales, 40% in the second month & 10% in third month
 - 3) The company has gross profit margin of 25%.
 - 4) Sales forecaste are as follows :

April'24	Rs. 3,00,000	sept.'24	Rs. 2,00,000
May	Rs. 3,50,000	oct	Rs. 3,00,000
June	Rs. 4,00,000	nov	Rs. 2,50,000
July	Rs. 1,50,000	dec	Rs. 2,00,000
Aug	Rs. 2,00,000	jan.'25	Rs. 3,00,000
 - 5) Anticipating sales of each month necessary purchases are made & paid for in the preceding month.
 - 6) Anticipated wages & salaries are as follows :

July	Rs.30,000	oct	Rs. 50,000
Aug	Rs. 40,000	nov	Rs. 40,000
Sept	Rs. 50,000	dec	Rs. 35,000
 - 7) Interest of 10% on debentures Rs. 5,00,000 is due on every 3 months as per calander
 - 8) Tax payment of Rs. 50,000 is due in October
 - 9) Machinery of Rs. 45,000 & Rs. 30,000 are planned to be purchased & paid for the Oct & Dec respectively.
 - 10) Rent of Rs. 2,000 is payable every month.
 - 11) The co. has a cash balance of Rs. 1,00,000 on 30-6-2024 which is the minimum desired level of cash . funds can be borrowed in multiples of Rs. 5,000 on a monthly basis at 12% per annum. Interest on such borrowing is payable in the next per month following the borrowing.
5. **E Ltd.** is proposed to take over an existing business. The company plans to raise Rs. 70 lakhs through equity shares and balance funds required for first six months through issue of Rs. 8 lakhs 9% debentures. Initially outlay consist of

Particulars	Amount (Rs.)
Land & building	30,00,000
Plant & machinery	14,00,000
Opening stock	8,00,000
Motor vehicles & office equipment	5,50,000

(payment on above items are to be made in the month of incorporation i.e. January Month)

sales during the six month ending on June 30, are estimated as under :

Month	Sales
January	18 lakhs
February	19 lakhs
March	22 lakhs
April	30 lakhs
May	32 lakhs
June	35 lakhs

Additional Information:

- Debtors collection period is 3 months.
- Creditors are paid after 2 months.
- Preliminary expenses Rs. 75,000 payable in March.
- General administration expenses Rs. 65,000 per month payable monthly.
- Wages & salaries:
 - Rs. 1,00,000 per month for January to March
 - Rs. 1,20,000 thereafter
 (Payable in next month)
- Gross profit ratio expected 22% on sales.
- Equity shares and debentures issued on 1st January.
- Stock level is maintained equal to opening stock.
- Machinery repairs Rs. 1,50,000 payable in May.
- Interest on debentures payable in June.
- Dividend received from investments Rs. 90,000 in April.
- Advance tax Rs. 1,00,000 payable in June.

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Required:

- Prepare Cash Budget for six months ending June 30.
6. Prepare cash budget of **F LTD** for July December from the following information
- The estimated sales, expenses etc. are as follows : (Rs. In lakhs)

Particulars	June	July	Aug	Sept	Oct	Nov	Dec
Sales	35	40	40	50	50	60	65
Purchases	14	16	17	20	20	25	28
Wages & salaries	12	14	14	18	18	20	22
Misc. expenses	5	6	6	6	7	7	7
Interest received	2	-	-	2	-	-	2
Sales of shares	-	-	20	-	-	-	-

- 20% of the sales are returned by customers. 2% of gross accounts receivables constitute bad debt losses. 50% of good accounts receivables are collected in the month of sales, & the rest in the next month.
 - The time lag in payment of misc. expenses & purchased is one month. Wages & salaries are paid fortnightly with a time lag of 15 days.
 - The company keeps a minimum cash balance of Rs. 5 lakhs. Cash in excess of Rs. 7 lakhs is invested in govt. securities in the multiple of Rs. 1 lakh. Shortfalls in the minimum cash balance are made good by borrowing from banks. Ignore interest received & paid.
7. **G Ltd.** from the following information , prepare cash budget from oct to dec, 2025

Month	Sales	Closing stock	o/h exp.
August	1,60,000	20,000	24,000
Sep	2,00,000	30,000	30,000
Oct	2,40,000	50,000	40,000
Nov	3,20,000	60,000	36,000
Dec	2,80,000	55,000	40,000
Jan	3,00,000	50,000	30,000

- 1) in oct., cash balance was Rs. 1,01,000
 - 2) goods are sold at profit of 33.33% on cost price
 - 3) purchases are made for cash
 - 4) cash sales -40%
 - 5) 50% of credit sales are realized in the month of following the sales . 50% in the second month following the sales.
 - 6) Overhead exp. Include Rs.10,000 as depreciation per month on fixed assets. It is paid in the same
 - 7) Tax is paid Rs. 20,000 in November.
 - 8) Co. keeps minimum cash balance is Rs. 25,000 . cash in excess of Rs. 65,000 is invested in government Bond in multiple of Rs. 10,000. Short fall in minimum cash balance are made good by borrowing from bank.
8. **H ltd.** From the following information prepare cash budget for January to March, 2025.

Months	sales (₹)	salary (₹)	Misc. Exp. (₹)
Nov.	8,00,000	1,20,000	1,08,000
Dec	8,80,000	1,20,000	1,08,000
Jan	4,80,000	96,000	84,000
Feb	4,00,000	96,000	1,20,000
March	6,00,000	96,000	96,000

- 1) cash balance at the end of Dec is Rs. 2,40,000.
- 2) 20% of total sales is cash sales.
- 3) Gross profit rate is 25% on sales.
- 4) 50% of credit sales is received after 1 month, 30% collection is received after 2 months & 20% is received after 3 months.
- 5) 20% of total purchase is cash purchase & rest is credit purchase. One month credit is received from suppliers.
- 6) Lag-time for salary payment is $\frac{1}{2}$ month & for Misc. expenses it is for 1 month.
- 7) Rs. 1,60,000 will be received from sale of investment during January.

PRACTICE EXAMPLES OF FLEXIBLE BUDGET

1. The following are the costs at 10,000 units of production:

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Particulars	Amount (Rs.)
Raw Materials	50,000 (100% varying)
Wages	30,000 (100% varying)
Power	2,500 (80% varying)
Repairs	4,000 (75% varying)
Stores	2,000 (100% varying)
Q.C. charges	1,000 (20% varying)
Depreciation	20,000 (100% fixed)
Administration expenses	10,000 (75% fixed)
Selling and distribution expenses	6,000 (50% varying)

Prepare flexible budget for 8,000 units and 12,000 units showing cost per unit.

2. Find out missing figures:

Production Capacity	70% (Rs.)	80% (Rs.)	90% (Rs.)
Power	(?)	20,000	21,750
Indirect Labour	10,500	(?)	13,500
Repairs	1,900	2,000	(?)
Salaries	(?)	10,000	10,000

3. The cost of article at the capacity level of 5000 units is given under A below :

for a variation of 20% in capacity above or below this level, the individual expenses vary as indicated under B below :

particulars	A	B(%)
material cost	25000	100 (variable)
labour cost	15000	100 (variable)
power	1250	80 (variable)
repair & maintenance	2000	75 (variable)
stores	1000	100(variable)
inspection	500	20 (variable)
administration overhead	5000	25(variable)
selling overheads	3000	50 (variable)
depreciation	10000	100 (fixed)
total	62750	
cost per unit	12.55	

- prepare the flexible budget at 4000 units & 6000 units.
4. The Following Particulars are available from the records of a manufacturing company for level of activity

Cost	60%	100%
Cost of direct material	Rs. 9000	Rs. 15,000
Cost of direct wages	6,000	10,000
Indirect wages	3,000	5,000
Repair and maintenance	6,500	9,500
Power and fuel	3,750	5,750
Rent	12,000	12,000
Depreciation	10,000	10,000
Insurance	6,000	6,000
Administrative o/h	10,000	14,000
Selling o/h	6,000	8,000

Total production at 100% capacity is 5000 units. prepare flexible budget at 70% and 90% capacity.

5. A company produces a wrist watches. During the year 2026, its production was 5000 units. The details for the production are given below: Selling price per watch is 200. Prepare flexible budget showing total cost, cost per unit, total profit and profit per unit when production is expected to be 6000 units. Particulars Rs. Direct materials 2,50,000 (100% variable) Direct labour 2,00,000 (100% variable) Power & Fuel 15,000 (75% variable) Repairs & Maintenance 25,000 (80% variable) Depreciation 1,00,000 (100% fixed) Selling & distribution expenses 60,000 (50% fixed) Total Production 5000 units

6. Find out missing figures:

Production Capacity	60% (Rs.)	75% (Rs.)	90% (Rs.)
Power	(?)	24,000	28,500
Indirect Labour	11,000	(?)	16,000
Repairs	2,200	2,800	(?)
Salaries	(?)	14,000	14,000
Supervision	5,500	(?)	7,000

7. Aarav Ltd. manufactures a single product at 100% capacity level of 15,000 units. Estimated costs at 50% and 70% capacities are as follows:

Marginal Costing and Budgetary control

Prepare Flexible Budget for 60% and 90% capacity showing total cost and per unit cost of production.

Particulars	At 50%	At 70%
Variable Expenses:		
Materials	3,00,000	4,20,000
Wages	1,80,000	2,52,000
Overheads	1,05,000	1,47,000
Semi-Variable Expenses:		
Salaries	3,50,000	3,90,000
Factory expenses	4,80,000	5,40,000
Fixed Expenses:		
Depreciation	1,00,000	1,00,000
Advertisement	15,000	15,000

8. A factory produces product "Y" and its installed production capacity at 100% is 50,000 units per annum.

Estimated cost of production at 50% and 80% capacities are as follows:

Flexible Budget at 60% and 90% capacity showing total cost and per unit cost of production.

Particulars	At 50%	At 80%
Materials	2,50,000	4,00,000
Wages	1,50,000	2,40,000
Direct expenses	1,00,000	1,60,000
Factory overheads	4,20,000	5,10,000
Administrative overheads	1,20,000	1,20,000
Total Cost	10,40,000	14,30,000
Total Units	25,000 units	40,000 units

Tips for Solving Flexible Budget Examples

1. First identify nature of all expenses

- ✓ Variable
- ✓ Fixed
- ✓ Semi-variable

This is the most important step.

2. Remember the Golden Rule

Cost Type	Total Cost	Per Unit Cost
Variable	Changes	Same
Fixed	Same	Changes
Semi-variable	Partly changes	Partly changes

3. Always find units first

If 100% capacity is given:

Formula:

$$\text{Units} = \text{Maximum Units} \times \frac{\text{Capacity}}{100}$$

Without units, per unit cost cannot be calculated correctly.

4. For Variable Cost use direct proportion

If production increases:

- 20% → variable cost increases 20%
- 50% → variable cost increases 50%

Shortcut:

$$\text{New Variable Cost} = \text{Old Cost} \times \frac{\text{New Capacity}}{\text{Old Capacity}}$$

5. Fixed Cost never changes

Even if production changes:

- Depreciation
- Insurance
- Office salary

remain same in total.

6. Separate Semi-variable Expenses carefully

Example:

Electricity Rs. 20,000 (40% fixed)

Then:

- Fixed = 8,000
- Variable = 12,000

Only variable portion changes with production.

Marginal Costing and Budgetary control

7. Use working notes

Do not calculate directly in table.

Make separate working:

- Variable part
- Fixed part
- Units
- Per unit cost

This reduces mistakes.

8. While calculating cost per unit

Always use:

Formula:

$$\text{Cost per Unit} = \frac{\text{Total Cost}}{\text{Total Units}}$$

9. If selling price is given

First calculate sales.

Formula:

$$\text{Sales} = \text{Units} \times \text{Selling Price per Unit}$$

Then:

Profit Formula:

$$\text{Profit} = \text{Sales} - \text{Total Cost}$$

Tips for Solving Cash Budget Examples

1. Read adjustment carefully first

Before solving, underline:

- Cash sales
- Credit sales collection
- Creditors payment
- Time lag
- Additional payments/receipts

Most mistakes happen here.

2. Prepare separate schedules

Always prepare:

- ✓ Collection from debtors
- ✓ Payment to creditors

✓ Wages payment

✓ Overheads payment

This makes final cash budget easy.

3. Remember time lag properly

Example:

"Debtors collected after 2 months"

Means:

- January sales collected in March
- February sales collected in April

Never take same month collection unless cash sales are given.

4. Cash sales come immediately

Cash sales are added in same month.

Formula:

$$\text{Cash Sales} = \text{Total Sales} \times \text{Cash Sales \%}$$

5. Credit sales collection

First remove cash sales.

Formula:

$$\text{Credit Sales} = \text{Total Sales} - \text{Cash Sales}$$

Then apply collection pattern.

6. Creditors payment trick

If materials are paid after 2 months:

- January purchase → paid in March
- February purchase → paid in April

Always shift payment according to lag.

7. Non-cash expenses are ignored

- Do NOT include:

Depreciation

Goodwill written off

Provision expenses

Because no cash payment occurs.

8. If lag is 1½ months (1.5 months)

This means:

Marginal Costing and Budgetary control

- Half payment in next month
- Remaining half payment in following month

Example:

Wages for January = Rs. 10,000

Lag = $1\frac{1}{2}$ months

Then payment:

- February '1 Rs. 5,000
- March '1 Rs. 5,000

9. If lag is $\frac{1}{4}$ month

$\frac{1}{4}$ month means one week delay approximately.

In practical cash budget problems:

75%($\frac{3}{4}$) payment in same month

25% ($\frac{1}{4}$) payment in next month

Example:

Wages = Rs. 20,000

Lag = $\frac{1}{4}$ month

Then:

- Same month payment = Rs. 15,000
- Next month payment = Rs. 5,000

10. Shortcut for Fractional Month Lag

Lag	Meaning
$\frac{1}{2}$ month	50%($\frac{1}{2}$) same month + 50% ($\frac{1}{2}$) next month
$\frac{1}{4}$ month	75% ($\frac{3}{4}$) same month + 25% ($\frac{1}{4}$) next month
$\frac{3}{4}$ month	25% ($\frac{1}{4}$) same month + 75% ($\frac{3}{4}$) next month
$1\frac{1}{2}$ month	50% next month + 50% second month

QUESTION BANK

Short Questions

1. What is Marginal Costing?
2. Define Break-Even Point (BEP).
3. What is Contribution in marginal costing?
4. State any two assumptions of Marginal Costing.
5. What is P/V Ratio?
6. Define Margin of Safety (MOS).

7. What is Budgetary Control?
8. Define Cash Budget.
9. What is Flexible Budget?
10. State any two advantages of Budgetary Control.

Long Questions

1. Explain the meaning and importance of Marginal Costing.
2. Differentiate between Marginal Costing and Absorption Costing.
3. Explain the concept of Break-Even Analysis.
4. Explain the importance of Budgetary Control.
5. Explain the advantages of Break-Even Analysis.
6. Explain the concept and advantages of Flexible Budget.
7. Explain the meaning and objectives of Cash Budget

