**objective questions on break-even analysis:**

**1 Break-even point is the point where:**

a) Total revenue equals total variable cost

b) Total revenue equals total fixed cost

c) Total revenue equals total cost (fixed + variable)

d) Profit is maximum

2 Contribution margin per unit is calculated as:

a) Selling price per unit - Variable cost per unit

b) Selling price per unit - Fixed cost per unit

c) Total revenue - Total variable cost

d) Total revenue - Total fixed cost

3.Margin of safety is the difference between:

a) Actual sales and break-even sales

b) Budgeted sales and break-even sales

c) Total revenue and total cost

d) Selling price and variable cost

4.Which of the following is NOT an assumption of break-even analysis?

a) Constant selling price per unit

b) Constant variable cost per unit

c) Constant total fixed cost

d) Fluctuating sales volume

5.If the selling price per unit increases, the break-even point:

a) Increases

b) Decreases

c) Remains the same

d) Cannot be determined

6. If the variable cost per unit decreases, the break-even point:

a) Increases

b) Decreases

c) Remains the same

d) Cannot be determined

7. If the fixed costs increase, the break-even point:

a) Increases

b) Decreases

c) Remains the same

d) Cannot be determined

**Understanding Break-Even Analysis**

* What is break-even analysis and why is it important for businesses?
* Explain the concept of contribution margin and its role in break-even analysis.
* How does break-even analysis help in decision-making regarding pricing, production levels, and cost control?
* What are the limitations of break-even analysis?

**Break-Even Analysis and Cost-Volume-Profit (CVP) Analysis**

* Explain the relationship between break-even analysis and CVP analysis.
* How can CVP analysis be used to determine the level of sales required to achieve a target profit?
* What is the concept of operating leverage and how does it affect the profitability of a business?

**Numerical Questions on break-even analysis and contribution margin:**

**Question 1:**

A company sells a product for ₹20 per unit. The variable cost per unit is ₹12, and the total fixed costs are ₹60,000.

a) Calculate the contribution margin per unit. b) Determine the break-even point in units. c) Calculate the break-even point in rupees. d) How many units must be sold to earn a profit of ₹30,000?

**Question 2:**

A company has fixed costs of ₹100,000 and a contribution margin ratio of 40%.

a) Calculate the break-even point in sales revenue. b) If the company wants to earn a profit of ₹50,000, what should be its sales revenue?

**Question 3:**

A company sells a product for ₹50 per unit. The variable cost per unit is ₹30. The fixed costs are ₹200,000.

a) Calculate the contribution margin per unit and the contribution margin ratio. b) Determine the break-even point in units and in sales revenue. c) If the company wants to earn a profit of ₹100,000, how many units must be sold?

**Question 4:**

A company sells a product for ₹100 per unit. The variable cost per unit is ₹60. The fixed costs are ₹240,000.

a) Calculate the break-even point in units and in sales revenue. b) If the company sells 6,000 units, what is its profit or loss? c) If the company wants to earn a profit of ₹120,000, how many units must be sold?

**Question 5:**

A company has a contribution margin of ₹40 per unit and fixed costs of ₹200,000.

a) Calculate the break-even point in units. b) If the company wants to earn a profit of ₹80,000, how many units must be sold?

**Remember to show your calculations clearly and use the following formulas:**

* **Contribution Margin per Unit:** Selling Price per Unit - Variable Cost per Unit
* **Contribution Margin Ratio:** (Contribution Margin per Unit / Selling Price per Unit) x 100
* **Break-even Point in Units:** Fixed Costs / Contribution Margin per Unit
* **Break-even Point in Sales Revenue:** Fixed Costs / Contribution Margin Ratio

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