Dr.SNS RAJALAKSHMI COLLEGE OF ARTS AND SCIENCE
(Autonomous)

Accredited by NAAC – UGC with 'A+ Grade (Cycle IV)
(Recognised by UGC, Approved by AICTE & Affiliated to Bharathiar University)
Coimbatore- 49

DEPARTMENT OF MATHEMATICS

21UCR304: BUSINESS CALCULUS AND FINANCIAL COMPUTATION

Marginal Cost

Ms.P.DEVIE ABIRAMI M.Sc., M.Phil.,
Assistant Professor,
Department of Mathematics

MARGINAL COST

Marginal cost is referred to as the cost that is incurred by any business when there is a need for producing additional units of any goods or services.

It is calculated by taking the total cost of producing the additional goods into account and dividing that by the change in the total quantity of the goods produced.

Marginal cost includes variable costs like material and labour. It also includes increments in any fixed costs such as overhead, administrative, and selling.

The marginal cost formula is used to optimise the cash flow generation and is represented as follows:

Marginal cost = (Change in cost) / (Change in quantity)

Marginal Cost

Marginal cost = (Change in cost) / (Change in quantity)

The change in cost is referred to as the change in the cost of production when there is a need for change in the volume of production. Manufacturing additional units requires more manpower and more raw materials, which causes changes in the overall production cost.

The change in quantity is the increase or decrease in the volume of production. There will be a difference in cost with an increase or decrease in production.

Marginal Cost

Key Aspects of Marginal Cost

- **Formula:** $\text{Marginal Cost} = \dfrac{\text{Change in Total Cost}}{\text{Change in Quantity}}$.
- **Purpose:** Businesses use MC to determine optimal production levels, maximize profits, and decide whether to scale production.
- **Profit Maximization:** A firm maximizes profit where Marginal Cost equals Marginal Revenue ($MC = MR$).
- **Behavior:** Marginal cost curves are often U-shaped, initially falling due to economies of scale (increased efficiency) and later rising due to diminishing marginal returns.

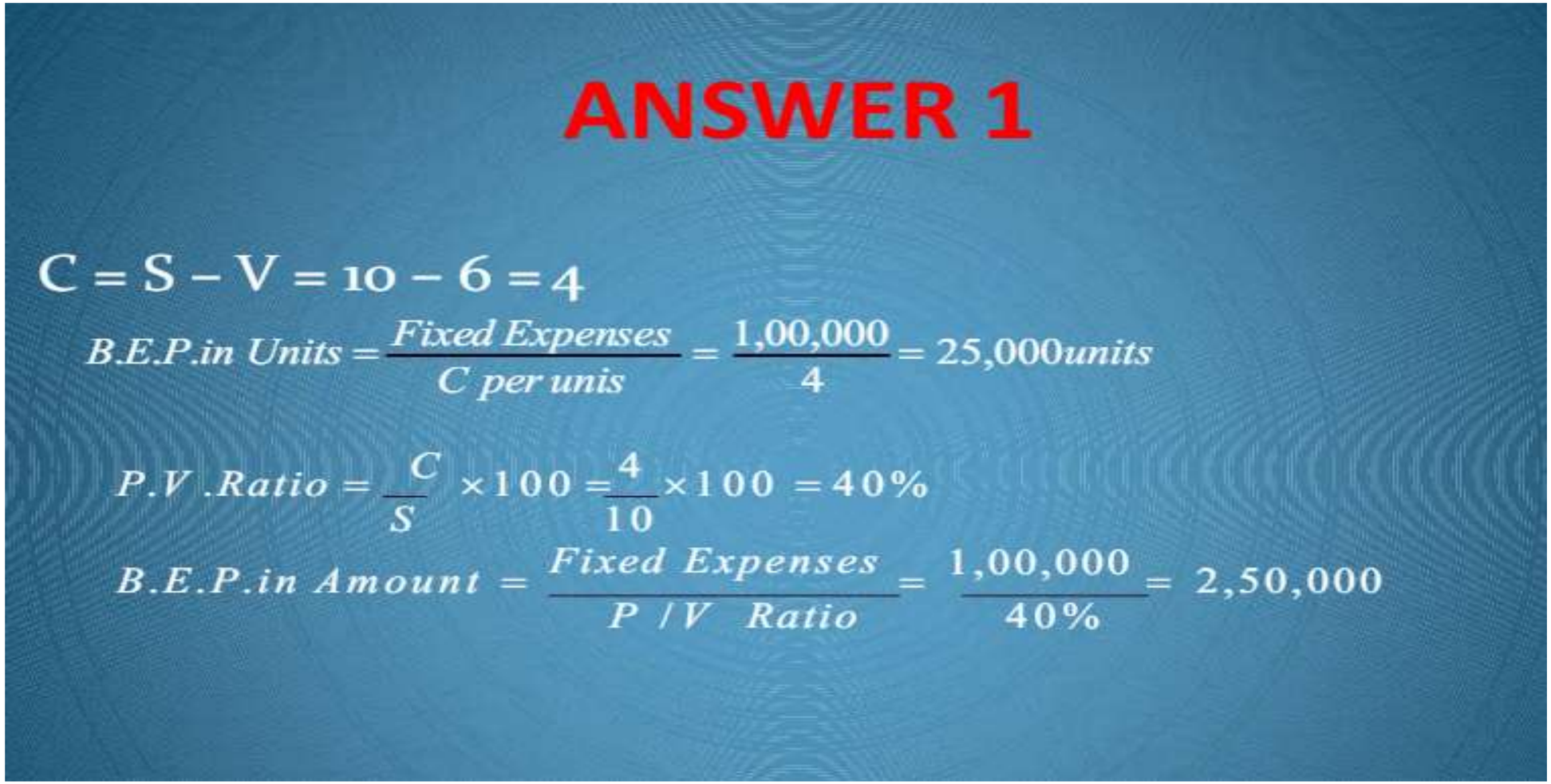
Marginal Cost

QUESTION 1

The Acme Company produces and sells one product. The revenue and cost structure of the product is given below:

Particulars	Amount in Rs.
Selling Price Per Unit	10.00
Variable Cost Per Unit	6.00
Total Fixed Cost per year	1,00,000
COMPUTE THE BREAK EVEN VOLUME IN UNITS AND RUPEES	

Marginal Cost



Marginal Cost

QUESTION 2

Calculate break even point on the basis of the following information supplied by a manufacturing firm:

PARTICULARS	AMOUNT IN Rs.
ESTIMATED SALES	10,00,000
ESTIMATED VARIABLE COSTS	6,00,000
ESTIMATED FIXED COSTS	2,00,000

Marginal Cost

ANSWER 2

$$C = S - V = 10,00,000 - 6,00,000 = 4,00,000$$

$$P.V.Ratio = \frac{C}{S} \times 100 = \frac{4,00,000}{10,00,000} \times 100 = 40\%$$

$$B.E.P.in\ Amount = \frac{Fixed\ Expenses}{P/V\ Ratio} = \frac{2,00,000}{40\%} = 5,00,000$$

Marginal Cost

QUESTIONS

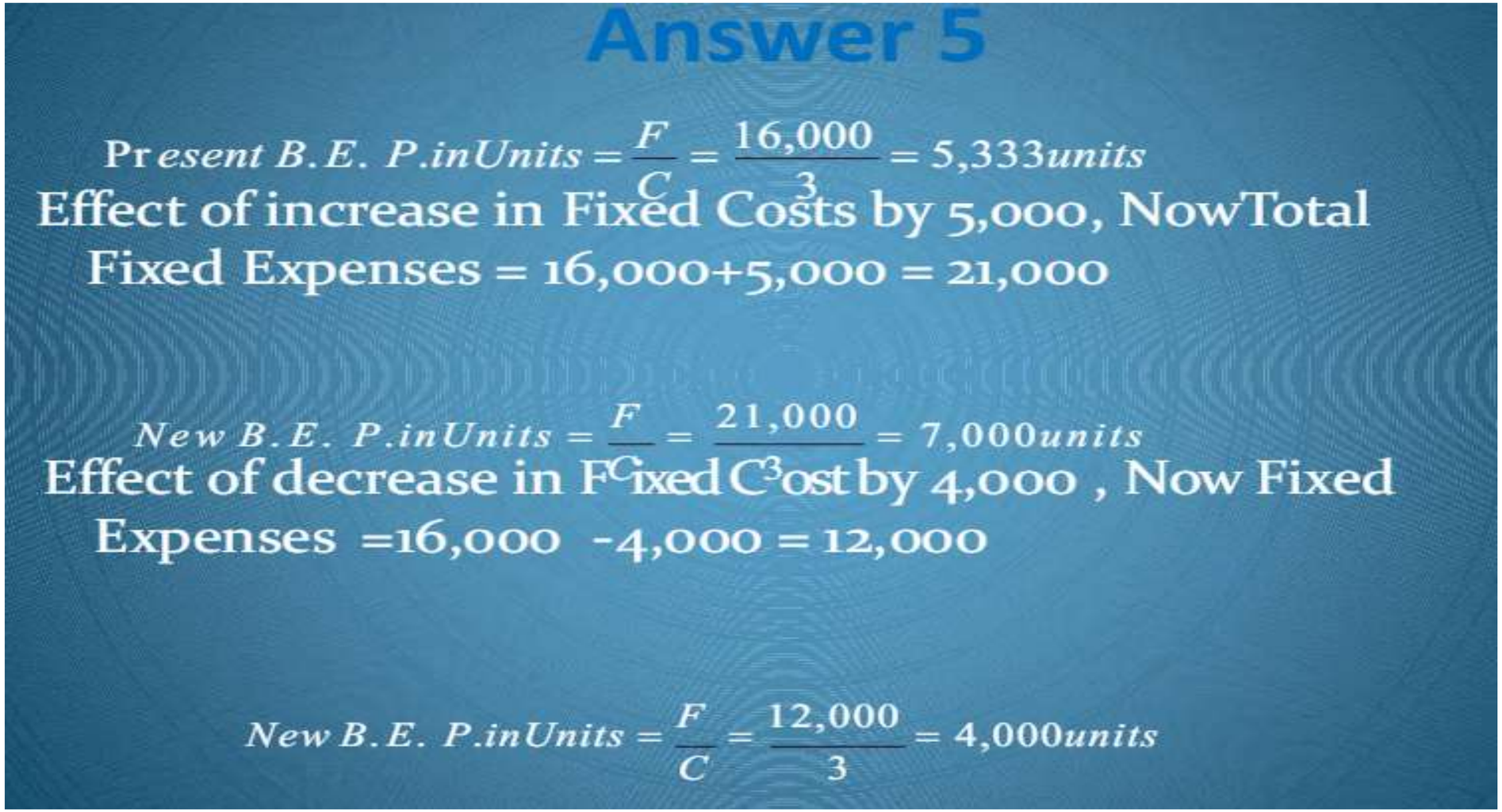
Given the following figures:

PARTICULARS	AMOUNT (Rs.)
FIXED COSTS	16,000
SELLING PRICE PER UNIT	8
VARIABLE COST PER UNIT	5

Show the impact of the following changes on break even point:

i. Fixed Cost increase by 5,000 Rs.
ii. Decrease in Fixed Costs by 4,000 Rs.
iii. 20% increase in variable cost
iv. Fixed Cost increase by 20% and variable costs decreased by 10%

Marginal Cost



THANK YOU