PERCENTAGE & PROFIT-LOSS

Complete SSC CGL Examination Notes

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1. PERCENTAGE CONCEPTS

Basic Formulas

Percentage = (Value/Total) × 100

Percentage Increase = (Increase/Original) × 100

Percentage Decrease = (Decrease/Original) × 100

New Value = Original × (1 ± Percentage/100)

Important Shortcuts

Fraction	Percentage	Fraction	Percentage
1/2	50%	1/8	12.5%
1/3	33.33%	1/9	11.11%
1/4	25%	1/10	10%
1/5	20%	1/11	9.09%
1/6	16.67%	1/12	8.33%
1/7	14.28%	1/20	5%

2. PROFIT & LOSS

Basic Formulas

Profit = Selling Price - Cost Price

Loss = Cost Price - Selling Price

Profit % = (Profit/CP) × 100

Loss % = (Loss/CP) × 100

SP = CP × (1 + Profit%/100)

SP = CP × (1 - Loss%/100)

CP = SP/(1 + Profit%/100)

CP = SP/(1 - Loss%/100)

Discount Formulas

Discount = Marked Price - Selling Price

Discount % = (Discount/MP) × 100

Selling Price = MP × (1 - Discount%/100)

Successive Discount: Net Discount = a + b - (a×b)/100

3. PRACTICE PROBLEMS

Problem 1: If price increases by 20%, by what % should consumption decrease to keep expense same?

Solution:

• Required % = [20/(100+20)] × 100 = (20/120)×100 = **16.67%**

Problem 2: CP of 20 articles = SP of 15 articles. Find profit %

Solution:

• CP × 20 = SP × 15

• SP/CP = 20/15 = 4/3

• Profit % = [(4-3)/3] × 100 = **33.33%**

Problem 3: Successive discounts of 20% and 10%. Find net discount

Solution:

• Net Discount = 20 + 10 - (20×10)/100

• = 30 - 2 = **28%**

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