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Profit and Loss Questions for SSC and Railway Exams.

Profit and Loss Quiz 8

Directions: Kindly study the following Questions carefully and choose the right answer:

1. Two toys are sold at Rs. 504 each. One toy brings the dealer a gain of 12% and the other a loss of 4%. The gain or loss per cent by selling both the toys is

A. $3\frac{5}{13}$ % profit

B. $4\frac{5}{13}$ % profit

C. $5\frac{1}{13}$ % profit

D. $2\frac{3}{13}$ % loss

2. Sagar purchased 30 kg of rice at the rate of Rs. 10 per kg and 35 kg at the rate of Rs. 11 per kg. He mixed the two. At what price per kg (in Rs.) should he sell the mixture to make a 30% profit in the transaction ?

A. 12.5

B. 13

C. 13.7

D. 14.25

3. A man purchased 150 pens at the rate of Rs. 12 per pen. He sold 50 pens at a gain of 10%. The percentage gain at which he must sell the remaining pens so as to gain 15% on the whole outlay is

A. $21\frac{1}{2}$ %

B. 20%

C. 17%

D. $17\frac{1}{2}$ %

4. A dealer sold two types of goods for Rs. 10,000 each. On one of them, he lost 20% and on the other he gained 20%. His gain or loss per cent in the entire transaction was

A. 2% loss

B. 2% gain

C. 4% gain

D. 4% loss

5. By selling 25 metres of cloth a trader gains the selling price of 5 metres of cloth. The gain percent of the trader in % is

A. 25%

B. 20%

C. 28%

D. 29%

6. An article is sold at a profit of 20%. If it had been sold at a profit of 25%, it would have fetched Rs. 35 more. The cost price of the article is :

A. Rs. 650

B. Rs. 700

C. Rs. 750

D. Rs. 800

7. If the ratio of cost price and selling price be 10 : 11, then the profit percentage is

A. 1%

B. 10%

C. 5%

D. 8%

8. There is a profit of 20% on the cost price of an article. The % of profit, when calculated on selling price is

A. $16\frac{2}{3}$%

B. 20%

C. $33\frac{1}{3}$%

D. None of these

9. A shopkeeper buys 144 items at 90 paise each. On the way 20 items are broken. He sells the remainder at Rs. 1.20 each. His gain per cent correct to one place of decimal is
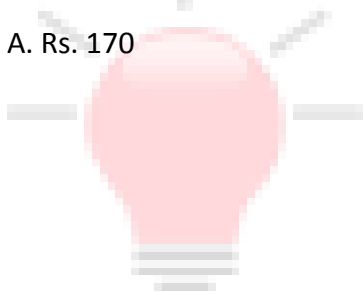
A. 13.8%

B. 14.6%

C. 14.8%

D. 15.8%

10. An item costing Rs. 200 is being sold at 10% loss. If the price is further reduced by 5%, the selling price will be

A. Rs. 170

B. Rs. 171

C. Rs. 175

D. Rs. 179

Correct Answers:

1	2	3	4	5	6	7	8	9	10
A	C	D	D	A	B	B	A	C	B

Explanations:

1. **Method I :**

CP of first toy = $\dfrac{100}{112}$ × 504 = Rs. 450

CP of second toy = $\dfrac{100}{96}$ × 504 = Rs. 525

Total CP = 450 + 525 = Rs. 975

Total SP = 2 × 504 = Rs. 1008

Profit = 1008 – 975 = Rs. 33

∴ Profit per cent = $\dfrac{33}{975}$ × 100 = $\dfrac{44}{13}$ = $3\dfrac{5}{13}$%

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Method II :

When two items sold at the same price Rs. A, and a profit of P% is made on the first and a loss of L% is made on the second, then the percentage profit or loss is

$\dfrac{100(P-L) - 2PL}{(100 + P) + (100 - L)}$

positive sign shows profit and negative sign shows loss.

Now,

$\dfrac{100(12 - 4) - 2 \times 12 \times 4}{(100 + 12) + (100 - 4)}$

$= \dfrac{800 - 96}{112 + 96} = \dfrac{704}{208} = 3\dfrac{5}{13}$% profit

Hence, option A is correct.

2. Total cost of rice = 30 × 10 + 35 × 11 = 300 + 385 = Rs. 685

Total Quantity of rice = 30 + 35 = 65 kg

Given, profit = 30%

$$\therefore \ SP = \frac{130}{100} \times 685 = Rs. \ \frac{13 \times 137}{2}$$

Rate per kg = $\dfrac{13 \times 137}{2 \times 65}$ = Rs. 13.7

Hence, option C is correct.

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3. CP of 150 pens = 150 × 12 = Rs. 1800

CP of 50 pens = 50 × 12 = Rs. 600

SP of 50 pens = $\dfrac{110}{100} \times 600$ = Rs. 660

SP of 150 pens on 15% profit = $\dfrac{115}{100} \times 1800$ = Rs. 2070

SP of remaining 100 pens = 2070 − 660 = Rs. 1410

CP of remaining 100 pens = Rs. 1200

Now, required gain % = $\dfrac{1410 - 1200}{1200} \times 100 = \dfrac{210}{12} = 17\dfrac{1}{2}\%$

Hence, option D is correct.

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4. In such a problem selling price is immaterial. There is always a loss given by :

Loss per cent = $\left(\dfrac{\text{common gain or loss \%}}{10}\right)^2 = \left(\dfrac{20}{10}\right)^2 = 4\%$

Hence, option D is correct.

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5. According to the question,

SP of 25 m of cloth – CP of 25 m of cloth = SP of 5 m of cloth

∴ CP of 25 m of cloth = SP of 20 m of cloth

To solve this question, we can apply a short trick approach

If the cost price of x articles is equal to the selling price of y articles, then the profit percentage = $\dfrac{x - y}{y} \times 100\%$.

x is the number of articles the cost price of which is given = 25

y is the number of articles the selling price of which is given = 20

By the short-trick approach, we get

Profit percent = $\dfrac{25 - 20}{20} \times 100 = \dfrac{5}{20} \times 100 = 25\%$

Hence, option A is correct.

6. Let the cost price of the article be Rs. x, then

125% of x − 120% of x = 35

⇒ 5% of x = 35

⇒ x = $\dfrac{35 \times 100}{5}$ = Rs. 700

Hence, option B is correct.

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7. Given ratio,

$\dfrac{CP}{SP} = \dfrac{10}{11}$

Let CP = 10/- and SP = 11/-

∴ Profit = 1/-

∴ Profit % = $\dfrac{\text{Profit}}{CP} \times 100\%$

= $\dfrac{1}{10} \times 100\% = 10\%$

Hence, option B is correct.

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8. Let CP of article = Rs. x

SP = $\dfrac{120x}{100}$ = Rs. $\dfrac{6x}{5}$

Profit = SP − CP = $\dfrac{6x}{5} - x$ = Rs. $\dfrac{x}{5}$

∴ Gain per cent = $\dfrac{\text{Profit}}{SP} \times 100 = \dfrac{\frac{x}{5}}{\frac{6x}{5}} \times 100 = \dfrac{50}{3} = 16\dfrac{2}{3}\%$

Hence, option A is correct.

9.

∴ CP of 144 items = $\dfrac{144 \times 90}{100}$ = Rs. 129.6

20 items are broken out of 144 items.

SP of 124 items = 1.20 × 124 = Rs. 148.8

∴ Gain = 148.8 − 129.6 = Rs. 19.2

∴ Gain per cent = $\dfrac{19.2}{129.6}$ × 100 = 14.8%

Hence, option C is correct.

10.

First SP of article = $\dfrac{200 \times 90}{100}$ = Rs. 180

After decrease of 5%,

SP = $\dfrac{180 \times 95}{100}$ = Rs. 171

Hence, option B is correct.