

Q:1 Find a equivalent discount equal to three successive discounts of 20%, 10% & 5% of a product.

1. 35%
2. 34.4%
3. 31.6%
4. 32%

Q:2 A shopkeeper purchased 510 eggs at the rate of Rs 20/dozen. 30 eggs were broken on the way. In order to make a gain of 20%. Find the rate at which he must sell the remaining eggs.

1. Rs. 22.50/dozen
2. Rs. 25.50/dozen
3. Rs. 26/dozen
4. Rs. 26.50/dozen

Q:3 A dishonest shopkeeper offers a 15% discount on a new variety of tea. But later it was found, that he weighed only 700 gm instead of 1 kg. Find his gain or loss percentage.

1. 18.6%
2. 20%
3. 25.25%
4. 21.4%

Q:4 If the cost price of 18 apples is equal to the selling price of 15 apples then, what would be the profit in selling 20 apples if the cost price of each apple is Rs.80?

1. Rs. 250
2. Rs. 480
3. Rs. 400
4. Rs. 320

Q:5 The cost price of 1 quintal of sugar bag is Rs. 2000. If the shopkeeper sells half of the bag of sugar at 20% profit and the rest at 10 % loss. Find the profit on the whole.

1. Rs. 100
2. Rs 200
3. Rs. 305
4. Rs. 250

Q:6 What will be the difference between a single discount of 20% on Rs. 2000 and 2 successive discounts of 10% and 10%?

1. Rs.20

2. Rs.25
3. Rs.30
4. Rs.200

Q:7 Ramu buys 10 identical watches at Rs 24000. He sells 3 of them at a loss of 20%. At what price (combined) should he sell the other 7 watches to gain a net profit of 10%?

1. Rs 20640
2. Rs 21550
3. Rs 20430
4. Rs 21780

Q:8 Mr. Reddy had some old clothes in his stock. After allowing a successive discount of 50% and 50% on the listed price, he sold cloth for Rs 50000. Find the listed price of the cloth.

1. 2 lakh
2. 20 lakh
3. 10 lakh
4. 2.5 lakh

Q:9 A shopkeeper marked up the cost price of the article by 33.33% and then later gave a discount of 25% on the same article. If the cost price of the article was Rs. 575, what is the final amount the customer paid?

1. Rs 625
2. Rs 600
3. Rs 575
4. Rs 500

Q:10 An article was sold at Rs.31.5 at a profit of 12.5%. What would be the selling price if it is sold at a 20% loss?

1. Rs.21
2. Rs.24.33
3. Rs.25.8
4. Rs.22.4

Answer Key

1. (3)	2. (2)	3. (4)	4. (4)	5. (1)
6. (1)	7. (1)	8. (1)	9. (3)	10. (4)

Answers and Solutions

Q:1 The correct answer is **option 3** i.e. **31.6%**.

$$\text{Equivalent discount\%} = x\% + y\% + z\% - (xy/100)\% - (yz/100)\% - (xz/100)\% + (xyz/10000)\%$$

Where, x, y, and z are three successive discounts

$$\Rightarrow x\% = 20\%$$

$$\Rightarrow y\% = 10\%$$

$$\Rightarrow z\% = 5\%$$

$$\text{Equivalent discount\%} = 20\% + 10\% + 5\% - 2\% - 0.5\% - 1\% + 0.1\% = 31.6\%$$

Q:2 The correct answer is **Option 2** i.e. **Rs. 25.50/dozen**.

$$\text{Cost of 510 eggs} = 20/12 \times 510 = \text{Rs } 850$$

To make 20% profit,

$$\text{He must sell all the eggs at price} = 850 \times 120/100 = \text{Rs } 1020$$

30 eggs were broken:

$$\text{He must sell 480 eggs at price} = 1020/480 \times 12 = \text{Rs } 25.50/\text{dozen}$$

Q:3 The correct answer is **Option 4** i.e. **21.4%**.

Let, the total quantity be 1 kg

He offers a 15% discount on 1 kg

$$\text{i.e. } 15\% \text{ of } 1 \text{ kg} = 15/100 \times 1000 \text{ grams} = 150 \text{ grams}$$

It shows be change only for 850 grams

But when he sold he weighed only 700 grams of tea

$$\text{So, He must gain } (850 - 700) \text{ gm} = 150 \text{ gm}$$

Therefore,

$$\text{Gain\%} = (\text{Gain}/\text{C.P.}) \times 100 = (150/700) \times 100 = 150/7 = 21.4\%$$

Q:4 The correct answer is **Option 4** i.e. **Rs.320**.

Let the cost price be CP and the selling price be SP

$$\Rightarrow 18 \text{ CP} = 15 \text{ SP}$$

$$\Rightarrow \text{SP}/\text{CP} = 18/15$$

$$\text{Profit\%} = [(18 - 15)/15] \times 100 = 20\%$$

The cost price of one apple = Rs.80

$$\text{Profit on one apple} = (80 \times 0.2) = \text{Rs.16}$$

$$\text{Profit on 20 apples} = (16 \times 20) = \text{Rs.320}$$

Q:5 The correct answer is **Option 1** i.e. **Rs. 100**.

1 quintal = 100 kg

So, the price of 100 kg = Rs. 2000

He sells half of the bag i.e. 50 kg at 20% profit

Cost price of 50 kg = Rs. 1000

The selling price of 50 kg = Cost price + profit

$$\text{Profit} = (\text{profit \%} \times \text{Cost price})/100 = (20 \times 1000)/100 = \text{Rs. } 200$$

$$\text{Selling price (I)} = 1000 + 200 = \text{Rs. } 1200$$

Rest half at 10% loss:

i.e. the selling price of the other 50 kg = Cost price of the other 50 kg - loss

$$\text{Loss} = (\text{loss \%} \times \text{cost price})/100 = (10 \times 1000)/100 = \text{Rs. } 100$$

$$\text{Selling price (II)} = 1000 - 100 = \text{Rs. } 900$$

$$\text{Total selling price} = 1200 + 900 = \text{Rs. } 2100$$

Hence,

$$\text{Profit} = \text{Total selling price} - \text{Cost price}$$

$$\Rightarrow 2100 - 2000 = \text{Rs. } 100$$

Q:6 The correct answer is **Option 1** i.e. **Rs.20**.

$$\text{Single discount of } 10\% \text{ and } 10\% \text{ discount} = 10 + 10 + (10 \times 10)/100 = 21\%$$

$$\text{The difference between the two discounts is } (21\% - 20\%) = 1\%$$

$$\Rightarrow 1\% \text{ of } 2000 = 2000 \times (1/100) = \text{Rs.20}$$

Q:7 The correct answer is **Option 1** i.e. **Rs. 20640**.

Cost of 10 watches = Rs 24000

Net profit = 10%

$$\text{Selling price of 10 watches} = (100 + 10)\% \text{ of } 24000 = \text{Rs } 26400$$

$$\text{Cost of 1 watch} = 24000/10 = \text{Rs } 2400$$

$$\text{Selling Price of 1 watch (20\% loss)} = (100 - 20)\% \text{ of } 2400 = \text{Rs } 1920$$

Hence,

$$\text{Selling Price of 7 watches} = 26400 - (3 \times 1920) = \text{Rs } 20640$$

Q:8 The correct answer is **Option 1** i.e. **2 lakh**.

Given,

$$\text{Discount} = 50\% + 50\%$$

$$\Rightarrow r = 50\%$$

$$\Rightarrow \text{S.P.} = \text{Rs } 50,000$$

Formula:



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Quantitative Aptitude - Profit and Loss

English

Successive discount = $r + r - [(r.r/100)]$

So,

Net discount = $50 + 50 - [(50 \times 50/100)] = 50 + 50 - 25 = 75\%$

$\Rightarrow (100 - 75)\% = 25\% = \text{Rs } 50,000$

Listed price = 100%

So, $100\% = (50000/25)100 = 200000 = 2 \text{ lakh}$

Q:9 The correct answer is **option 3** i.e. **Rs 575**.

The final price paid by the customer = $575[1 + (1/3)][1 - (1/4)]$

$\Rightarrow 575(4/3)(3/4) = \text{Rs } 575$

Q:10 The correct answer is **option 4** i.e. **Rs.22.4**.

Let the cost price of the article be 'x'

$\Rightarrow 112.5\% \text{ of } x = 31.5$

$\Rightarrow x = 31.5 \times 100/112.5$

$\Rightarrow x = 28$

When selling at a loss of 20%

$\Rightarrow 80\% \text{ of } x$

$\Rightarrow 80/100 \times 28$

$\Rightarrow \text{Rs.}22.4$

