

PROFIT AND LOSS

CONCEPT for PROFIT and LOSS:

Cost Price (CP): The money paid by the shopkeeper to the manufacturer or whole -seller to buy goods is called the cost price (cp) of the goods purchased by the shopkeeper.

Selling Price (SP): The price at which the shopkeeper sells the goods is called selling price (s.p) of the goods sold by the shopkeeper to the customer.

Profit: If the selling price of an article is more than its cost price, then the dealer (or shopkeeper) makes a profit (or gain) i.e., Profit = SP – CP; SP > CP

Loss: If the selling price of an article is less than its cost price, the dealer suffers a loss i.e., Loss = CP – SP; CP > SP

(i) Profit = SP – CP

(ii) Loss = CP – SP

(iii) Profit percentage = $\left(\frac{\text{Profit}}{\text{CP}} \times 100 \right) \%$

(iv) Loss percentage = $\left(\frac{\text{Loss}}{\text{CP}} \times 100 \right) \%$

(v) $S.P = \left(\frac{(100 + \text{Profit}\%) \times \text{CP}}{100} \right) = \left(\frac{(100 - \text{Loss}\%) \times \text{CP}}{100} \right)$

(vi) $C.P = \left(\frac{100 \times \text{SP}}{100 + \text{Profit}\%} \right) = \left(\frac{100 \times \text{SP}}{100 - \text{Loss}\%} \right)$

(vii) SP = (100 + x)% of CP; when Profit = x% of CP

(viii) SP = (100 – x)% of CP; when Loss = x% of CP

Example 1: A man purchases an item for Rs. 120 and he sells it at a 20 percent profit, find his selling price

Sol.
$$SP = \left(\frac{100 + \text{Profit}\%}{100} \right) \times CP$$
$$= \frac{100 + 20}{100} \times 120 = \frac{120}{100} \times 120 = \text{Rs. } 144$$

Note: Profit /Loss percentage is always calculated on C.P. unless otherwise stated.

Example 2: Find the cost price of an article which is sold for Rs. 200 at a loss of 20%

Sol.
$$CP = \frac{100}{100 - \text{Loss}\%} \times SP = \frac{100}{100 - 20} \times 200 = \text{Rs. } 250$$

Concept 1:

MARK UP AND DISCOUNT

Marked Price: To avoid loss due to bargaining by the customer and to get profit over the cost price, the trader increases the cost price. This increase is known as markup and the increased price (i.e., cp+markup) is called the marked price or printed price or list price of the goods.

Marked Price = CP + markup

$$\text{Marked Price} = \text{CP} + \frac{(\% \text{marked}) \times \text{CP}}{100}$$

Generally goods are sold at marked price, if there is no further discount, then in this case selling price equals marked price.

Discount: Discount means reduction of marked price to sell at a lower rate or literally discount means concession.

Basically, it is calculated on the basis of marked price.

Selling price = Marked price – Discount

$$\text{Selling price} = \text{MP} - \frac{(\% \text{ Discount}) \times \text{MP}}{100}$$

SOLVED EXAMPLES

Example: If the cost price of an article is Rs. 300 and the percent markup is 30%. What is the marked price?

Sol.
$$\text{MP} = \text{CP} + (\% \text{ markup on CP}) = 300 + \frac{30}{100} \times 300 = \text{Rs. } 390$$

Concept 2:

Dishonest Dealer Case: If a trader professes to sell his goods at cost price, but uses false weights, then

$$\begin{aligned} \% \text{ gain} &= \frac{\text{Error}}{\text{True value} - \text{Error}} \times 100 \Rightarrow \% \text{ gain} \\ &= \frac{\text{True weight} - \text{False weight}}{\text{False weight}} \times 100 \end{aligned}$$

Example: A shopkeeper sold an article at cost price but use the weight of 960 gm in place of 1 kg weight. Find his profit%?

Sol.
$$\begin{aligned} \text{Profit\%} &= \frac{\text{True weight} - \text{False weight}}{\text{False weight}} \times 100 = \frac{1000 - 960}{960} \times 100 \\ &= \frac{40}{960} \times 100 = \frac{25}{6} = 4\frac{1}{6}\% \end{aligned}$$

Concept 3:

Where two articles are sold at same price but one of them at a profit and another at a loss and the percentage profit is the same as the percentage loss, In this case there is always a loss.

$$\text{Loss\%} = \left(\frac{\text{Common Profit or Loss\%}}{10} \right)^2 = \left(\frac{\% \text{ value}}{10} \right)^2$$

Sol. Total s.p = 1000 2 Rs. 2000

CP of 1st car = $(100 * 1000)/125 = \text{Rs. } 800$

Cp of 2nd car = $(100 * 1000)/75 = \text{Rs. } 33\frac{1}{3}$

Total CP = Rs. $2133\frac{1}{3} \Rightarrow \text{Loss\%} = \frac{\text{CP} - \text{SP}}{\text{CP}} \times 100$

$$= \frac{2133\frac{1}{3} - 2000}{2133\frac{1}{3}} \times 100 = 6.25\%$$

or, Using Shortcut Formula

$$\text{Loss\%} = \left(\frac{\% \text{ value}}{10} \right)^2 = \left(\frac{25}{10} \right)^2 = 6.25\%$$

Concept 4:

When two successive discounts on an article are x% and y% resp. then net discount: $\left(x + y - \frac{xy}{100} \right) \%$

Example: A shopkeeper given two successive discount of 50% and 50% find the real (equivalent) discount?

Sol. Let MP = Rs. 100

Cost after 1st discount of 50% = $100 - 50\% \text{ of } 100 = \text{Rs. } 50$

Cost after 2nd discount of 50% = $50 - 50\% \text{ of } 50 = \text{Rs. } 25$

Price after both discount = Rs. 25

% discount = $(100 - 25)/100 * 100 = 75\%$

or, Using Shortcut Formula

$$\begin{aligned}\% \text{ discount} &= x + y - xy/100 \quad [\text{where } x = 50\%, y = 50\%] \\ &= 50 + 50 - (50 \times 50)/100 = 100 - 25 = 75\%\end{aligned}$$

SOLVED EXAMPLES

1. There is a profit of 20% on the cost price of an article. Find the profit percent when calculated on selling price?

Sol. Let the cost price of an article be Rs. 100

then, Profit = 20% of 100 = Rs. 20

$$\text{Profit\% when calculated on SP} = \frac{20}{120} \times 100 = \frac{100}{6} = 16\frac{2}{3}\%$$

Selling price = Cost price + profit = 100 + 20 = Rs. 120

2. By selling a bicycle for Rs. 2850, a shopkeeper gains 14%. If the profit is reduced to 8%, find the selling price of bicycle?

$$\text{Sol. CP} = \frac{\text{SP} \times 100}{100 + \text{Profit\%}} = \frac{2850 \times 100}{100 + 14} = \frac{2850 \times 100}{114} = \text{Rs. 2500}$$

SP of article for 8% Profit

$$\text{SP} = \frac{\text{CP} \times (100 + \text{Profit\%})}{100} = \frac{2500 \times 108}{100} = \text{Rs. 2700}$$

3. The selling price of 12 articles is equal to the cost price of 15 articles. Find the gain percent?

Sol. Let the CP of 1 article = Rs. x

Cost Price of 15 article = Rs. 15x

Selling Price of 12 article = Rs. 15x

SP of 1 article = Rs. 15x/12

$$\text{Gain} = \frac{15x}{12} - x = \frac{3x}{12} = \frac{x}{4}$$

$$\text{Gain\%} = \frac{\text{Gain} \times 100}{\text{CP}} = \frac{\frac{x}{4} \times 100}{x} = 25\%$$

4. A fruit seller buys some fruits at the rate of 11 for Rs. 10 and the same number at the rate of 9 for Rs. 10. If all the fruits are sold for Rs. 1 each. Find the gain or loss percent?

Sol. In these types of question, we have to take the LCM of number of individual things.

Number of fruits of each type he bought = LCM of 11 and 9 = 99

Total number of fruits = 99 × 2 = 198

$$\text{CP of 198 fruits} = \frac{10}{11} \times 99 + \frac{10}{9} \times 99 = 90 + 110 = \text{Rs. 200}$$

$$\text{SP} = 198 \times 1 = \text{Rs. 198}$$

$$\text{Loss\%} = \frac{\text{CP} - \text{SP}}{\text{CP}} \times 100 = \frac{200 - 198}{200} \times 100 = \frac{2}{200} \times 100 = 1\%$$

5. A book vendor sold a book at a loss of 10%. Had he sold it for Rs. 108 more, he would have earned a profit of 10%. Find the cost of the book. Sol. Let the CP article = x

$$\text{SP} = \frac{x(100-10)}{100} = \frac{90x}{100} = \frac{9x}{10}$$

$$9x/10 + 108 = 110x/100$$

$$\frac{110x}{100} - \frac{9x}{10} = 108 \Rightarrow \frac{11x}{10} - \frac{9x}{10} = 108$$

$$2x = 1080 \Rightarrow x = \text{Rs. 540}$$

6. A person bought some article at the rate of 5 per rupee and the same number at the rate of 4 per rupee. He

mixed both the types and sold at the rate of 9 for Rs. 2. In this business he suffered a loss of Rs. 3. Find the total no. of articles bought by him?

Sol. Let the person buys 10 articles

$$\text{Total CP} = \text{Rs.} \left(5 \times \frac{1}{5} + \frac{5 \times 1}{4} \right) = \text{Rs.} \left(1 + \frac{5}{4} \right) = \text{Rs.} \frac{9}{4}$$

$$\text{SP of 10 articles} = \frac{2}{9} \times 10 = \text{Rs.} \frac{20}{9}$$

$$\text{Loss} = \text{Rs.} \left(\frac{9}{4} - \frac{20}{9} \right) = \left(\frac{81 - 80}{36} \right) = \text{Rs.} \frac{1}{36}$$

If loss is Rs. $\frac{1}{36}$, then number of articles = 10

If loss is Rs. 3, number of articles = $36 \times 10 \times 3 = 1080$

7. A man buys a field of agricultural land for Rs. 360000. He sells $\frac{1}{3}$ rd at a loss of 20% and $\frac{2}{5}$ th at a gain of 25%. At what price must he sell the remaining field so as to make an overall profit of 10%?

$$\text{Sol. SP of total agricultural field} = \text{Rs.} \left(360000 \times \frac{110}{100} \right) = \text{Rs.} 396000$$

[overall profit of 10%]

SP of $\frac{1}{3}$ rd of the field

$$= \frac{1}{3} \times 360000 \times \frac{80}{100} \text{ [Loss of 20\%]} \Rightarrow \text{Rs.} 96000$$

SP of $\frac{2}{5}$ th of the field

$$= \frac{2}{5} \times 360000 \times \frac{125}{100} \text{ [Gain of 25\%]} \Rightarrow \text{Rs.} 180000$$

$$\text{SP of the remaining field} = \text{Rs.} (396000 - 96000 - 180000) = \text{Rs.} 120000$$

8. One trader calculates the percentage of profit on the buying price and another calculates on the selling price. When their selling price are the same, then difference of their actual profit is Rs. 85 and both claim to have made 20% profit. What is the selling price of each?

Sol. For first trader, Let the CP of the article of Rs. 100, SP = Rs. 120

For second trader, SP of the article = Rs. 120

Gain = 20% [For both the traders]

Let the CP be x

$$\frac{120 - x}{120} \times 100 = 20 \Rightarrow 120 - x = \frac{20}{5} \times 6$$

$$\Rightarrow 120 - x = 24 \Rightarrow x = 120 - 24 = \text{Rs.} 96$$

Gain = Rs. 24 [SP - CP]

Difference of gain = $24 - 20 = \text{Rs.} 4$

If the difference of gain be Rs. 4, then

SP = Rs. 120

When the difference be Rs. 85, then

$$\text{SP} = \frac{120}{4} \times 85 = \text{Rs.} 2550$$

9. If the sales tax be reduced from $3\frac{1}{2}\%$ to $3\frac{1}{3}\%$. What difference does it make to person who purchases an article whose marked price is Rs. 8400?

Sol. Initial sales tax = $3\frac{1}{2}\%$, Final sales tax = $3\frac{1}{3}\%$

Difference in percentage of sales tax

$$= \left(3\frac{1}{2} - 3\frac{1}{3} \right) \% = \frac{1}{6} \%$$

$$\text{Req. diff.} = \frac{1}{6} \% \times 8400 = \frac{1}{6} \times \frac{1}{100} \times 8400 = \text{Rs. } 14$$

10. A man sells two cycle for Rs. 1710. The cost price of the first is equal to the selling price of the second. If the first is sold at 10% loss and the second at 25% gain, what is his total gain or loss?

Sol.

	1 st Cycle	2 nd Cycle	Total
CP	100	$100 \left(\frac{100}{125} \right) = 80$	180
SP	$100 \left(\frac{90}{100} \right) = 90$	100	190

$$\text{Total CP} = (\text{CP of 1st Cycle}) + (\text{CP of 2nd Cycle}) \\ = 100 + 80 = \text{Rs. } 180$$

$$\text{Total SP} = (\text{SP of 1st Cycle}) + (\text{SP of 2nd Cycle}) \\ = 90 + 100 = \text{Rs. } 190$$

$$\text{CP} : \text{SP} = 180 : 190 = 18 : 19$$

$$\text{Profit} = (19 - 18)/19 \times 1710 = \text{Rs. } 90$$

11. Ashish bought an article with 20% discount on the labelled price. He sold the article with 30% profit on the labelled price. What was his percent profit on the price he bought?

Sol. Let the labelled price of the article be Rs. X

$$\text{Cost Price} = x \left(\frac{100 - 20}{100} \right) = \text{Rs. } \frac{4x}{5}$$

$$\text{Selling Price} = x \left(\frac{100 + 30}{100} \right) = \text{Rs. } \frac{13}{10} x$$

$$\text{Profit} = \frac{13}{10} x - \frac{4}{5} x = \frac{13x - 8x}{10} = \frac{x}{2} [\text{SP} - \text{CP}]$$

$$\% \text{Profit} = \frac{\frac{x}{2}}{\frac{4x}{5}} \times 100 = \frac{5}{8} \times 100 = \frac{125}{2} = 62.5\%$$

12. A shopkeeper sold an article for Rs. 400 after giving 20% discount on the labelled price and made 20% profit on cost price. What was the percentage profit, had he not given the discount?

Sol. Labelled Price = $\frac{400 \times 100}{80} = \text{Rs. } 500$ [Before discount of 20%]

$$\text{Cost Price of article} = \frac{400 \times 100}{120} = \text{Rs. } \frac{1000}{3} \quad [20\% \text{ profit on CP}]$$

$$\text{Profit\%} = \frac{500 - \frac{1000}{3}}{\frac{1000}{3}} \times 100 = \frac{1500 - 1000}{1000} \times 100 = \frac{500}{1000} \times 100 = 50\%$$

13. A reduction of 20% in the price of mangoes enables a person to purchase 12 more for Rs. 15. Find the price of 16 mangoes before reduction?

Sol. Let the price of 1 mango be x paise

$$\text{Number of mangoes for Rs. } 15 = \frac{1500}{x} \quad [\text{Rs. } 1 = 100 \text{ paise}]$$

$$\text{New price of one mango} = (80\% \text{ of } x) \text{ paise} = \frac{80}{100} \times x = \frac{4}{5} x \text{ paise}$$

$$\text{Number of mangoes for Rs. } 15 = \left(\frac{1500 \times 5}{4x} \right)$$

$$\frac{7500}{4x} - \frac{1500}{x} = 12 \quad [\text{Diff. as mentioned in the Ques.}]$$

$$\text{Cost of 16 mangoes before reduction} = \frac{31.25 \times 16}{100} = \text{Rs. } 5$$

Sol. Original Company price = $\frac{8500 \times 100}{100 - 15} = \text{Rs. } 10000$

Now, according to the question, $\frac{x-10000}{10000} \times 100 = 10$ [Profit of 10%]

Total selling price = Rs. 11000

Profit% $124000/500000 * 100 = 24.8\%$

A. $\frac{27}{4}\%$ B. $\frac{8}{3}\%$ C. $\frac{25}{6}\%$ D. $\frac{21}{4}\%$

Q10. A man sold two cows at Rs. 1995 each. On one he lost 10% and on the other he gained 10%. What is his gain or loss percent?

- A. 4% B. 2% C. 0.5% D. 1%

Q11. Two discounts of 40% and 20% equal to a single discount of?

- A. 48% B. 53% C. 52% D. 60%

Q12. Amit buys 5 watches for Rs. 9450 and later sells them for Rs. 9700. How much profit does Amit make per watch?

- A. Rs. 75 B. Rs. 80 C. Rs. 60 D. None of these

Q13. The price of 12 chair and 8 table is Rs. 676. What is the price of 21 chair and 14 table?

- A. Rs. 1183 B. Rs. 4732 C. Rs. 1180 D. Can't determine

Q14. Aditya sold TV to Sanjay at 12% more than the CP. If Sanjay paid Rs. 17696 for that TV then what was the original price of the TV?

- A. Rs. 15500 B. Rs. 15820 C. Rs. 15520 D. Rs. 15800

Q15. Amit purchased 13 chair of Rs. 115 each and sold all at Rs. 1220. Then find the profit or Loss on the transaction

- A. Rs. 280 loss B. Rs. 275 loss C. Rs. 325 profit D. Rs. 350 profit

Q16. Aditya purchase a book with a 20% discount on the marked price. How much did he pay if the book marked was Rs. 500?

- A. Rs. 400 B. Rs. 300 C. Rs. 200 D. Rs. 500

Q17. By selling a book for Rs. 360, 20% profit was earned. What is the CP of the book?

- A. Rs. 300 B. Rs. 200 C. Rs. 250 D. Can't determine

Q18. Profit earned by selling an article of Rs. 1630 is same as the loss incurred by selling the article for Rs. 1320. What is the CP?

- A. Rs. 1475 B. Rs. 1300 C. Rs. 1350 D. Rs. 1275

Q19. If the CP of 50 items is equal SP of 40 items then what is the profit or loss%?

- A. 20% B. 15% C. 25% D. 35%

Q20. If a banana cost is Rs. 1.25 and apple cost is Rs. 1.75 the what will be the cost of 2 Dozen of Banana and 3 Dozen of apple?

- A. Rs. 93 B. Rs. 83 C. Rs. 85 D. Rs. 70

Q21. Nutan bought a watch with 24% discount. If she pays Rs. 779 for that watch then what is the marked price of watch?

- A. Rs. 950 B. Rs. 975 C. Rs. 1000 D. Rs. 1025

Q22. Nutan pays Rs. 2140 for 3 calculator and 4 Pen while he pay Rs. 1355 for an additional calculator and 5 Pen. Then what he paid for Calculator only?

- A. Rs. 175 B. Rs. 480 C. Rs. 655 D. Can't determine

Q23. A vendor bought toffees at 6 for a rupee. How many for a rupee must he sell to gain 20%?

- A. 3 B. 4 C. 5 D. 6

Q24. A man sold his two horses for Rs. 770 each, on one he gained 10% & on the other he lost 10%. The average gain or loss percentage is

- A. 100% B. 0.96% C. 4% D. 1%

Q25. If the selling price of an article is $\frac{4}{3}$ rd of its cost price the profit in the transaction is

- A. $16\frac{2}{3}\%$ B. $20\frac{1}{2}\%$ C. $25\frac{1}{2}\%$ D. $33\frac{1}{3}\%$

Q26. A sells his house worth Rs. 10 lakh to B at a loss of 10%. Later B sells it back to A at 10% profit. The result of the two transactions is

- A. A neither loses nor gains B. A loses Rs. 90,000 C. A loses Rs. 2,00,000 D. None of these

Q27. A fair price shopkeeper takes 10% profit on his goods. He lost 20% goods during theft his loss% is

- A. 8% B. 10% C. 11% D. 12%

Q28. Aditya bought 200 dozen orange at Rs. 10 per dozen and he spent Rs. 500 on transportation. He sold each orange at Rs. 1 each. What was his profit or loss%?

- A. 5% B. 6% C. 4% D. Can't determine

- Q29. If 11 Mango are bought for Rs. 10 and sold at 10 for Rs. 11. What was Gain or Loss%?
 A. 24% B. 21% C. 26% D. 25%
- Q30. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, then the value of x is:
 A. Rs. 15 B. Rs. 16 C. Rs. 18 D. Rs. 25
- Q31. If selling price is doubled, the profit triples. Find the profit percent:
 A. $66\frac{2}{3}\%$ B. 100% C. $105\frac{1}{3}\%$ D. 120%
- Q32. Some articles were bought at 6 articles for Rs. 5 and sold at 5 articles for Rs. 6. Gain percent is:
 A. 30% B. $33\frac{1}{3}\%$ C. 35% D. 44%
- Q33. The cost price of 12 tables is equal to the selling price of 16 tables. The loss percent is
 A. 15% B. 20% C. 25% D. 30%
- Q34. Two continuous discounts of 4% on anything should be equal to
 A. 8% B. 20% C. 10% D. 16%
- Q35. A sells a bicycle to B at a profit of 20% and B sells it to C at a profit of 25%. If C pays Rs. 1500, what did A pay for it?
 A. Rs. 825 B. Rs. 1000 C. Rs. 1100 D. Rs. 1125
- Q36. Ram purchases a chair at Rs. 70 and spent Rs. 17 on its repair and 50 paise on cartage. If he sold the chair at Rs. 100 then his approximate margin of profit will be?
 A. 13.30% B. 11.25% C. 12.5% D. 14.3%
- Q37. A shopkeeper marks his goods 20% above CP but allows 30% discount for cash. His net loss is?
 A. 8% B. 20% C. 10% D. 16%
- Q38. A single discount, equivalent to a successive discount of 40% and 30% is?
 A. 55% B. 56% C. 57% D. 58%
- Q39. If the CP of 13 bats is Rs. 390. What is the price when it is sold at 10% loss?
 A. Rs. 200 B. Rs. 300 C. Rs. 350 D. None of these
- Q40. If an item is sold for Rs. 924 then there is a profit of 10% then what is the cost price?
 A. Rs. 840 B. Rs. 860 C. Rs. 880 D. Rs. 900

Type 2 – Moderate

- Q1. The cost of an article including the sales tax is Rs. 616. The rate of sales tax is 10%, if the shopkeeper has made a profit of 12%, then the cost price of the article is?
 A. Rs. 350 B. Rs. 500 C. Rs. 650 D. Rs. 800
- Q2. Two third of consignment was sold at a profit of 5% and the remainder at a loss of 2%. If the total profit was Rs. 400, the value of the consignment was?
 A. Rs. 112000 B. Rs. 14000 C. Rs. 15000 D. Can't determine
- Q3. A tradesman gives 4% discount on the marked price and gives one article free for buying every 15 articles and thus gains 35%. The marked price is approx. how much percent above the CP?
 A. 20% B. 30% C. 40% D. 50%
- Q4. When a producer allows 36% concession on the retail price of his product, he earns a profit of 8.8%. What would be his profit percent if the commission is reduced by 24%?
 A. 48.2% B. 49% C. 49.6% D. 51%
- Q5. A person earns 15% on investment but loses 10% on another investment. If the ratio of the two investments be 3 : 5, what is the gain or loss on the two investments taken together?
 A. 0.625% B. 0.8% C. 0.9% D. 1.2%
- Q6. The profit earned by selling an article for Rs. 900 is double the loss incurred when the same article is sold for Rs. 450. At what price should the article be sold to make 25% profit?
 A. Rs. 400 B. Rs. 500 C. Rs. 700 D. Rs. 750
- Q7. A shopkeeper sold some article at the rate of Rs. 35 per article and earned profit of 40%. At what price each article should have been sold so that profit of 60% was earned.

- A. Rs. 45 B. Rs. 42 C. Rs. 39 D. Rs. 40
- Q8. Due to a 20% rise in price of sugar, a bachelor is able to buy 1.5 kg less for Rs. 135. What is the increased price of sugar per kg?
- A. Rs. 15 B. Rs. 21 C. Rs. 18 D. Rs. 24
- Q9. A trader mixes 26 kg of rice at Rs. 20 per kg with 30 kg of rice of other variety at Rs. 36 per kg and sells the mixture at Rs. 30 per kg. His profit percent is:
- A. No profit, no loss B. 5% C. 8% D. 10%
- Q10. A TV set is being sold for Rs. x in Chandigarh. A dealer went to Delhi and bought the TV at 20% discount (from the price of Chandigarh). He spent Rs. 600 on transport. Thus he sold the set in Chandigarh for Rs. x making $14\frac{2}{7}\%$ profit. What was x?
- A. Rs. 9600 B. Rs. 8800 C. Rs. 8000 D. Rs. 7200
- Q11. Sanjay purchased a chair marked at Rs. 800 at 2 successive discounts of 10% and 15% respectively. He spent Rs. 28 on transportation and sold the chair for Rs. 800. How much is his gain percentage?
- A. 14% B. 30% C. 25% D. 40%
- Q12. When a book is sold at its Marked Price it gives a profit of 40%. What will happen if it is sold at half the marked Price?
- A. 30% profit B. 25% loss C. 30% loss D. 40% profit
- Q13. Aditya purchased 14 shirt & 25 pants at Rs. 45 and Rs. 55 respectively what should be the approximate overall average selling price of shirt and pant so that 40% profit is earned?
- A. Rs. 72.5 B. Rs. 71 C. Rs. 72 D. Rs. 70
- Q14. A person sells 36 apple per rupee and suffers a loss of 4%. Find how many apple per rupees to be sold to have a gain of 8%.
- A. 32 B. 16 C. 4 D. 15
- Q15. Ram sells an article to Girish at a gain 20%, Girish sells it to Sanjay at a gain of 10% and Sanjay sells it to Aditya at a gain of $1\frac{1}{2}\%$. If aditya pay Rs. 59.40. What did it cost Ram?
- A. Rs. 40 B. Rs. 22 C. Rs. 24 D. Rs. 18
- Q16. A fruit seller sells $\frac{3}{5}$ part of fruit at a profit of 10% and remaining at a loss of 5%. If the total profit is Rs. 1500 then what is the total cost price of fruit?
- A. Rs. 37500 B. Rs. 37000 C. Rs. 36500 D. Rs. 36000
- Q17. A shopkeeper buys a toy at Rs. 100 and sells it at Rs. 125. Another shopkeeper buys the same toy at Rs. 125 but sells it at Rs. 100. What are the respective profit and loss percentages for the two shopkeepers.
- A. 20%, 20% B. 25%, 20% C. 25%, 25% D. 25%, $16\frac{2}{3}\%$
- Q18. The marked price of a bed is Rs. 2400. The shopkeeper gives successive discounts of 10% and X% to customer. If the customer pays Rs. 1836 for the bed then find the value of X?
- A. 15% B. 18% C. 12% D. 10%
- Q19. Three successive discounts of 10%, 12% and 15% will amount to a single discount of?
- A. 39.28% B. 32.68% C. 34.68% D. 37%
- Q20. A loss of 19% gets converted into profit of 17% when the selling price is increased by Rs. 162. Find the cost price of the article.
- A. Rs. 300 B. Rs. 350 C. Rs. 400 D. Rs. 450
- Q21. A shopkeeper sold an article offering discount of 5% and earn a profit of 23.5%. What would have been the percentage of profit earned if no discount has been offered?
- A. 23% B. 30% C. 33% D. Can't determine
- Q22. If Aditya sells an article to Nutan at 10% gain, while Nutan sells it to Manish at 20% gain at Rs. 1914 then what is the Cost Price?
- A. Rs. 1450 B. Rs. 1340 C. Rs. 1560 D. Rs. 1780
- Q23. Rita buys an article for Rs. 9600. She sold it at 12% loss and get some money and from that money she again buys an article and this time she got 12% profit. What was profit or loss she got form this transaction?
- A. Rs. 130 B. Rs. 138 C. Rs. 138.24 D. Rs. 138.42
- Q24. Nutan bought 30 dozens of oranges for her juice stall in the school fair. She paid Rs. 8 per dozen of oranges. She also had to pay Rs. 500 as the stall fee to the school authorities. She calculated that each glass of

juice would need 3 oranges. How much should she charge per glass of juice so as to make 20% profit?

- A. Rs. 7.20 B. Rs. 7.40 C. Rs. 7.60 D. Rs. 7.80

Q25. Aditya bought a scooter for a certain sum of Money. He spend 15% of cost price on repair and sold it for a profit on Rs. 1104. What will he spend on repair if profit he got was 20%?

- A. Rs. 600 B. Rs. 700 C. Rs. 800 D. Rs. 900

Q26. In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?

- A. 30% B. 70% C. Rs. 100% D. 250%

Q27. A shopkeeper sells one transistor for Rs. 840 at a gain of 20% and another for Rs. 960 at a loss of 4%. His total gain or loss percent is:

- A. $5\frac{15}{17}\%$ Loss B. $5\frac{15}{17}\%$ gain C. $6\frac{2}{3}\%$ gain D. $6\frac{1}{2}\%$ Loss

Q28. A dealer buys a table listed at Rs. 600 and gets successive discount of 10% and 20%. What is his profit or loss percent if he sells at Rs. 540?

- A. 25% B. 20% C. 15% D. $17\frac{1}{2}\%$

Q29. Sonal buys mangoes at the rate of 3 kgs for Rs. 21 and sells them at 5 kgs for Rs. 50. To earn a profit of Rs. 102, he must sell how many mangoes?

- A. 34 kgs B. 52 kgs C. 26 kgs D. 32 kgs

Q30. An electric pump was sold at a profit of 15%. Had it been sold for Rs. 600, the profit would have been 20%. The former selling price is

- A. Rs. 500 B. Rs. 540 C. Rs. 575 D. Rs. 600

PREVIOUS YEARS(MEMORY BASED)

Q1. Abhishek makes a profit of Rs.110, if he sells a certain number of pens he has at the price of Rs. 2.5 per pen and incurs a loss of Rs. 55, if he sells the same number of pens for Rs. 1.75 per pen. How many pens does Abhishek have?

- A. 220 B. 240 C. 200 D. Can't determine

Q2. Ram purchased a Computer set of Rs. 12500 and spent Rs.300 on transportation and Rs. 800 on installation. At what price should he sell it so as to earn an overall profit of 15%?

- A. Rs. 14560 B. Rs. 14375 C. Rs. 15460 D. Rs. 15375

Q3. Mahesh purchased 25 kg of rice @ 32 per kg and 15 kg of rice @ Rs. 36 per kg. He mixed the two varieties of rice and sold it @ Rs. 40.20 per kg. What is the per cent profit earned?

- A. 25 B. 40 C. 30 D. 20

Q4. While selling a watch, a shopkeeper gives a discount of 15%. If he gives a discount of 20%, he earns Rs. 51 less as profit. What is the original price of the watch?

- A. Rs. 920 B. Rs. 985 C. Rs. 1125 D. Rs. 1020

Q5. A shopkeeper purchased 245 pieces of an article at Rs. 30 per piece. He spent Rs. 980 on transport and Rs. 1470 on packing the articles. He sold the articles at the rate of Rs. 50 per piece. What is the percent profit earned?

- A. 25% B. 20% C. 28% D. 22.5%

Q6. An article is marked for sale at Rs. 504. The shopkeeper gives a discount of 5% on the sale price and still earns a profit of 20%. What could be the purchase price of the article?

- A. Rs. 399 B. Rs. 405 C. Rs. 403 D. Rs. 400

Q7. A shopkeeper sold an article for Rs. 400 after giving 20% discount on the labelled price and made 30% profit on the cost price. What would have been the percentage profit, had he not given the discount?

- A. 25% B. 35% C. 50% D. 62.5%

Q8. Suresh purchased a TV set for Rs. 11250. He spent Rs. 800 on installation and Rs. 150 on transportation. At what price should it be sold so that the profit earned would have been 15%, if no discount was offered?

- A. Rs. 12938 B. Rs. 14030 C. Rs. 13450 D. Rs. 15467

A. Rs. 1242 B. Rs. 1380 C. Rs. 1280 D. Rs. 1200

Q10. Rajesh purchased a mobile phone and a refrigerator for Rs. 12000 and Rs. 10000 respectively. She sold the refrigerator at a loss of 12 per cent and mobile phone at a profit of 8 per cent. What is her overall loss/profit?

A. Loss of Rs. 280 B. Profit of Rs. 2160 C. Loss of Rs. 240 D. Profit of Rs. 2060

Q11. Abhishek purchased 140 shirts and 250 trousers @ Rs. 450 and @ Rs. 550 respectively. What should be the overall average selling price of shirts and trousers so that 40% profit is earned? (rounded off to next integer)

A. Rs. 725 B. Rs. 710 C. Rs. 720 D. Rs. 700

Q12. A trader marks his goods 40% above the cost price and allows a discount of 25%. The profit he makes, is

A. 15% B. 10% C. 5% D. 2%

Q13. A man sold his two cars for Rs. 4.5 lakh each. In the sale of first car, he incurred 20% profit and in the sale of the second, he incurred 20% loss. The total amount of profit or loss is?

A. Profit of Rs. 20250 B. Loss of Rs. 20250 C. Profit of Rs. 37500 D. Loss of Rs. 37500

Q14. By selling an article at 80% of its marked price, a shopkeeper makes a loss of 10%. What will be the profit percentage if he sells it at 95% of its marked price?

A. 6.9% B. 5% C. 5.9% D. 12.5%

Q15. A trader purchase a wrist watch and a pendulum for Rs.390. He sells them making a profit of 10% on the watch and 15% on the pendulum. He earns a profit of Rs. 51.50. The difference between the original prices of the pendulum and the watch is equal to?

A. Rs. 80 B. Rs. 120 C. Rs. 110 D. Rs. 100

Q16. A tradesman gives 4% discount on the marked price and gives 1 book free for buying every 15 books and thus gains 35%. The marked price is increased above the cost price by (appx.)

A. 40% B. 35% C. 50% D. 20%

Q17. A shopkeeper purchased 150 identical pieces of furniture at the rate of Rs. 250 each. He spent an amount of Rs. 2500 on packing. He fixed the price of each each furniture at Rs. 320. However, he decided to give a discount of 5% on the labelled price. What is the percent profit earned by him?

A. 16% B. 15% C. 14% D. 20%

Q18. An Ox and a carriage together cost Rs. 8000. The ox is sold at profit of 10% and carriage is sold at loss of 10%. If total profit made is 2.5%, then what is the cost price of the ox?

A. Rs. 3000 B. Rs. 3500 C. Rs. 4000 D. Rs. 5000

Q19. With a 5% discount on the cost of sugar, a buyer could purchase 2 kg more sugar for Rs. 608. Selling price of sugar is?

A. Rs. 15.50 B. Rs. 15 C. Rs. 16.50 D. Rs. 16

Q20. A trader marked his goods at 20% above the cost price. He sold half the stock at the marked price, one quarter at a discount of 20% on the marked price and the rest at a discount of 40% on the marked price. His total gain is?

A. 2% B. 4.5% C. 13.5% D. 15%

Answer Key

Type 1

1. A	2. B	3. B	4. C	5. A	6. A	7. C	8. D	9. C	10. D
11. C	12. D	13. A	14. D	15. B	16. A	17. A	18. A	19. C	20. A
21. D	22. B	23. C	24. D	25. D	26. D	27. D	28. C	29. B	30. B
31. B	32. D	33. C	34. C	35. B	36. D	37. D	38. D	39. D	40. A

Type 2

1. B	2. C	3. C	4. C	5. A	6. D	7. D	8. C	9. B	10. C
11. C	12. C	13. C	14. A	15. A	16. A	17. B	18. A	19. B	20. D
21. B	22. A	23. C	24. B	25. C	26. B	27. B	28. A	29. A	30. C

Previous year questions

1. A	2. D	3. D	4. D	5. A	6. A	7. D	8. B	9. D	10. C
11. C	12. C	13. D	14. A	15. C	16. A	17. C	18. D	19. D	20. A

