



RRB JE Profit & Loss Questions Set-2 PDF

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Instructions

For the following questions answer them individually

Question 1

If an article is sold at Rs. 304.5, the shopkeeper incurs a loss of 13%. What should be his selling price to gain a profit of 13%?

- A Rs. 395.5
- B Rs. 387.5
- C Rs. 399
- D Rs. 391.5
- E Rs. 401

Answer: A

Explanation:

Let cost price be 'cp', and the two selling prices be 'sp1' and 'sp2' respectively.

Loss% = (cost price - selling price) * 100 / (cost price)

$$0.13 * cp = cp - sp1$$

$$sp1 = 0.87 * cp$$

$$cp = 304.5 / 0.87 = 350$$

Profit% = (- cost price + selling price) * 100 / (cost price)

$$0.13 * 350 = sp2 - 350$$

$$sp2 = \text{Rs. } 395.5$$

Hence, option A is the right choice.

Question 2

Ram buys toys at 8 pieces per 70 rupees. He sells toys in boxes containing 5 toys. At what price must he sell a box if he wants to realize a profit percentage of 60%?

- A Rs. 50
- B Rs. 60
- C Rs. 70
- D Rs. 80
- E Rs. 90

Answer: C

Explanation:

Let us assume that Ram buys 40 pieces. He will buy 40 pieces for $70 * 5 = \text{Rs. } 350$.

Ram will pack these 40 pieces into $40 / 5 = 8$ boxes.

Ram wants to realize a profit percentage of 60%.

$$\Rightarrow \text{Selling price of the 8 boxes} = 1.6 * 350 = \text{Rs. } 560$$

$$\Rightarrow \text{Selling price of 1 box} = \text{Rs. } 560 / 8 = \text{Rs. } 70$$

Therefore, option C is the right answer.

Question 3

A salesman makes a profit of 30% when he gives a discount of 35% on the marked price. What will be the profit if the discount given is 20%?

- A 45%
- B 50%

- C 63%
- D 55%
- E 60%

Answer: E

Explanation:

Let 'x' be the marked price.

Discount of 35%, selling price will be = $0.65x$

Since the profit is 30%,

cost price * 1.3 = $0.65x$

cost price = $0.5x$

When discount of 20%, selling price will be = $0.8x$

Profit% = $\frac{0.8x - 0.5x}{0.5x} * 100 = 60\%$

Hence, option E is the right answer.

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Question 4

A dishonest shopkeeper marks up the price of the goods by 50 % and then offers a discount of 20 %. He uses a faulty weighing machine which shows 1000 g when the actual weight is 800 g. What is his profit percentage in the sales?

- A 25 %
- B 20 %
- C 50 %
- D 32 %
- E 40 %

Answer: C

Explanation:

Let he has 1000 g of goods and cost price of this entire lot is 1000. So selling price would be $1000 * 1.5 * 0.8 = 1200$. i.e 1.2 per gram.

Now, the machine measures 1000 gm for 800 gm. Hence, he can sell 1000 gm as 1250 gm. Thus, the amount earned by him will be $1250 * 1.2 = 1500$.

Hence, the profit percentage is 50 %.

Question 5

An article when sold for 960 fetches 20% profit. What would be the percent profit /loss if such 5 article are sold for Rs. 825/-each?

- A 3.125 % profit
- B 3.125 % loss
- C Neither profit nor loss
- D 16.5 % profit
- E None of these

Answer: A

Explanation:

Let cost price of an article = Rs. $100x$

If Selling price = Rs 960

$$\Rightarrow \text{Profit \%} = \frac{960 - 100x}{100x} \times 100 = 20$$

$$\Rightarrow 960 - 100x = 20x$$

$$\Rightarrow 20x + 100x = 120x = 960$$

$$\Rightarrow x = \frac{960}{120} = 8$$

Thus, cost price of 1 article = $100 \times 8 = \text{Rs. } 800$

If selling price = Rs. 825

$$\therefore \text{Profit \%} = \frac{825 - 800}{800} \times 100$$

$$= \frac{25}{8} = 3.125\%$$

\Rightarrow Ans - (A)

Question 6

Mahesh bought 10 pencils for 80 rupees and he sold them at 9.2 rupees per each pencil. What is the profit /loss percentage?

A 17%

B 25%

C 20%

D 15%

Answer: D

Explanation:

Cost price of 10 pencils = Rs 80

Selling price of 10 pencils = $9.2 \times 10 = \text{Rs } 92$

Profit percentage = $\frac{(92 - 80)}{80} \times 100 = \frac{12}{80} \times 100 = 15\%$.

So the correct option to choose is D - 15%

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Question 7

The cost price of an article is Rs.1700. If it was sold at a price of Rs.2006, what was the percentage profit on the transaction?

A 18

B 12

C 10

D 15

E 20

Answer: A

Explanation:

Profit = S.P. - C.P. = $2006 - 1700$

= Rs. 306

=> Profit % = $\frac{306}{1700} \times 100$

= 18%

Question 8

Manoj incurred a loss of 40 percent on selling an article for 5,700. What was the cost price of the article ?

- A 7,725
- B 9,080
- C 8,250
- D 9,400
- E None of these

Answer: E

Explanation:

SP = 5700

Loss percentage = 40%

$(CP - SP) / CP = 40 / 100$

$CP = (5/3) \times SP$

= 9500

Question 9

A whole-seller sells apples to a fruit vendor at cost price. The vendor manages to trick the whole-seller into giving him an extra apple per four apples that he buys. But, the whole-seller on sensing some foul play decides to change the weighing machine, citing some fault in it, for measuring the remaining two-thirds of the lot. The new weighing machine is such that it shows the weight of 3 apples equivalent to 5 apples. How much does the whole-seller originally gain/lose in the entire transaction? (Assume all apples to be of uniform size and weight)

- A Loss of 18.33%
- B Gain of 18.33%
- C Loss of 37.78%
- D Gain of 37.78%

Answer: D

Explanation:

Given, fruit vendor buys at the cost price to the whole-seller.

Let, us assume the cost price of an apple = Re 1

Two cases arise:

Case 1: Before changing weighing machine

Since, the vendor is getting an apple extra per 4 apples bought

For whole-seller:

CP = Rs 5

SP = Rs 4

Loss % = $\left[\frac{5-4}{5} \right] \times 100 = 20\%$

Case 2: After changing weighing machine

For whole-seller:

CP = Rs 3

SP= Rs 5

$$\text{Profit \%} = \left[\frac{5-3}{3} \right] * 100 = 66.67\%$$

Since, the measurements in the two lots are in the ratio of 1:2
We can apply alligation to find out the net profit/loss %:

$$\begin{array}{cc} -20 & 66.67 \\ & \times \\ 1 & 2 \end{array}$$

On solving for x

$$\frac{66.67-x}{x+20} = \frac{1}{2}$$

$$\Rightarrow x \approx 37.78\%$$

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Question 10

A shopkeeper, after being insisted by a customer, gives a discount of 33.33%. He later realizes that he made a loss of Rs 10. He calculates that he should have given a discount of only 20% to get the profit of Rs 10. By what % does the shopkeeper mark up the price of the item?

A 36.36%

B 25%

C 30%

D 33.33%

Answer: A

Explanation:

Let the MP of the item be x .

Thus, according to the given conditions we get

$$\frac{x - SP}{x} = \frac{1}{3}$$

$$\Rightarrow 3x - 3SP = x$$

$$\text{Thus, } SP = 2x$$

He made a loss of Rs 10 on selling the item at this SP.

$$\text{Thus, } CP = 2x - 10$$

After giving a discount of 20% the SP would have been $0.8x$

He made a profit of Rs 10 on selling the item at this SP.

$$\text{Thus, } CP = 0.8x - 10$$

$$\text{Thus, we get, } \frac{2x}{2x} = \frac{4x}{4x}$$

$$10 + 3 = 5 - 10$$

$$\text{Thus, } \frac{x * (12 - 10)}{15} = 20$$

$$\text{Thus, } x = 150 = MP$$

$$\text{Thus, } CP = 0.8 * 150 - 10 = 110$$

$$100 * (150 - 110)$$

Thus, the shopkeeper marks up the price of the given item by $\frac{100}{110} \approx 36.36\%$

Hence, option A is the correct answer.

Question 11

For an umbrella, the ratio of the marked price to the cost price is 9 : 8. What is the approx. profit/loss percentage if the ratio of the percentage discount offered and the profit or loss percentage were in the ratio 4 : 5?

- A 6.4% loss
- B 6.6% profit
- C 5.8% loss
- D 7.1% profit

Answer: B

Explanation:

$$\frac{\text{marked price}}{\text{cost price}} = \frac{9}{8}$$

Let the marked price = $9x$ and cost price = $8x$

$$\frac{\text{percentage discount}}{\text{profit/loss percentage}} = \frac{4}{5}$$

Let the percentage discount = $4y\%$ and profit/loss percentage = $5y\%$

Considering there is a profit,

$$\text{Selling price} = (1 - 4y\%) * 9x = (1 + 5y\%) * 8x$$

$$9x - 36xy/100 = 8x + 40xy/100$$

$$x = 76xy/100$$

$$y = 100/76$$

So percentage profit = $5 * 100/76 = 6.6\%$ approx.

Hence, option B is the right answer.

Question 12

Arjun sells a cycle to Ben at a profit of 28%. Charan buys it from Ben at Arjun's cost price. What is Ben's percentage profit or loss in the transaction?

- A 33.33%
- B 14.58%
- C 21.88%
- D 36.67%
- E 36.58%

Answer: C

Explanation:

Let Arjun's CP be x

Arjun's SP will be $1.28x$

Ben's CP = $1.28x$

Given, Charan's CP = x . Hence, Ben's SP = x .

Hence, Ben's loss = $0.28x$

$$\text{Loss \%} = (0.28/1.28) * 100 = 21.88\%$$

Question 13

A person marked up an item 16% above Cost Price and gave a discount of 25%. Then find effective loss percent.

- A 15%
- B 11%
- C 9%
- D 13%

Answer: D

Explanation:

Let the Cost Price of the item be Rs.100

Then, Marked Price = 116% of Rs.100 = Rs.116

Selling Price after a discount of 25% = 75% of Rs.116 = Rs.87

Therefore, Effective loss percent = $\frac{100-87}{100} \times 100 = 13\%$

Question 14

A person bought 50 oranges for Rs.450 and sold at the rate of Rs.108 per dozen. Then, find overall profit/loss percent.

- A 11.11% loss
- B No Profit No loss
- C 12.5% profit
- D 11.11% profit

Answer: B

Explanation:

Cost Price of 50 oranges = Rs.450

Cost Price of 1 orange = $450/50 = \text{Rs.}9$

Selling Price of 12 oranges = Rs.108

Selling Price of 1 orange = $\text{Rs.}108/12 = \text{Rs.}9$

Therefore, Profit = $\text{Rs.}9 - \text{Rs.}9 = 0$

Hence, There is no profit and no loss in this transaction.

Question 15

A shopkeeper purchased a TV for Rs.2,000 and a radio for Rs.750. He sells the TV at a profit of 20% and the radio at a loss of 5%. The total loss or gain is

- A Gain Rs.353.50
- B Gain Rs.362.50
- C Loss Rs.332
- D Loss Rs.300

Answer: B

Explanation:

Cost price of TV = Rs. 2000

Profit % = 20%

=> Selling price of TV = $2000 + \left(\frac{20}{100} \times 2000\right)$

= $2000 + 400 = \text{Rs. } 2400$

Similarly, selling price of radio = $750 - \left(\frac{5}{100} \times 750\right)$

= $750 - 37.5 = \text{Rs. } 712.5$

Thus, total cost price = $(2000 + 750) = \text{Rs. } 2750$

and total selling price = $(2400 + 712.5) = \text{Rs. } 3112.5$

∴ **Gain** = $3112.5 - 2750 = \text{Rs. } 362.50$

=> Ans - (B)

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