

Quiz Date: 22<sup>nd</sup> February 2020

Q1. Veer started a business with an investment of Rs. 32000. Ayush joined him with investment of 12.5% more than that of Veer. After 4 months, Ayush invest 20% more while Veer withdraws  $\frac{3}{10}$ th of his investment. Again after 4 months, Deepak joined them with Rs. 54000. If at the end of the year they earned a profit of Rs. 73850, find the difference between the profit share of Veer and Deepak.

- (a) Rs. 6650
- (b) Rs. 4280
- (c) Rs. 5660
- (d) Rs. 5220
- (e) Rs. 4780

Q2. A man bought two articles at different cost price and sold them, Ist at 12.5% profit and second at profit of 20%. The selling price of both the items is same and difference of profit earn on both is Rs. 10. Find the total cost price of both articles (in Rs.)?

- (a) 280
- (b) 300
- (c) 310
- (d) 320
- (e) 350

Q3. The cost price of a product is Rs R. A person raises its price by X% and then offers a discount of Z% on it, so that the selling price becomes Rs R. If twice of Z is equal to X then find value of Z?

- (a) 25%
- (b) 40%
- (c) 20%
- (d) 50%
- (e) 100%

Q4. Negi and Atul started a business with some investments. Negi, work as a manager, gets  $\frac{2}{5}$ th of the annual profits as salary and the remaining are equally divided among Negi and Atul. If the entire profit was divided among Negi and Atul in the ratio of their investments, Negi would have received Rs.1400 less than what he actually got. Atul got a profit share of Rs.5100. If Atul's investment is Rs.52000 then what is the Negi's investment?

- (a) 75000
- (b) 84000
- (c) 90000
- (d) 45000
- (e) None of these

Q5. A watch dealer usually sells watches for Rs.2350 per watch. Once he gave two successive discounts of 15% and 25% while selling a watch to a customer. But he charged an additional

8% on the net sale price from the customer. By what percent is the new selling price less than the original selling price?

- (a) 28.45%
- (b) 29.25%
- (c) 30.45%
- (d) 31.15%
- (e) 33.35%

Q6. A shoemaker bought 150 calculators at the rate of Rs. 250 per calculator. He spent Rs. 2500 on transportation and packing. If the marked price of calculator is Rs. 320 per calculator and the shopkeeper gives a discount of 5% on the marked price then what will be the percentage profit gained by the shopkeeper?

- (a) 20%
- (b) 14%
- (c) 15%
- (d) 16%
- (e) None of these

Q7. A dealer sold a camera at a profit of 5%. Had he sold it for Rs. 120 more, he would have gained 15%. For what value should he sell it in order to gain 10%?

- (a) Rs. 1320
- (b) Rs. 1330
- (c) Rs. 1230
- (d) Rs. 1260
- (e) Rs. 1435



Q8. A manufacturer manufactures phone. While manufacturing he incur two types of cost – Fixed cost & variable cost. His total fixed cost is Rs.'x' annually and he can produce only 1,00,000 units in an year.If he produces 60,000 units, his per unit cost is Rs.9 and if he produces 1,00,000 units, his per unit cost is Rs.7.40. Then, find at what price per unit he should sell 80,000 units, if he wants to earn 20% profit.

- (a) Rs.8.4
- (b) Rs.8
- (c) Rs.9.6
- (d) Rs.10
- (e) None of the above.

Q9. Marked price of two articles A and B is in the ratio of 3:4. Shopkeeper sold article A and article B at the discount of  $x\%$  and  $(x+8)\%$  respectively. Shopkeeper made a profit of 20% on selling article B and found that its cost price is equal to selling price of article A. Find the marked of article B when article A is sold for Rs 972 at two successive discounts of  $\frac{x}{2}\%$  and  $2x\%$ ?

- (a) Rs 1800
- (b) Rs 2000
- (c) None of the above
- (d) Rs 1600
- (e) Rs 2800

Q10. P and Q started a business by investing Rs. 45,000 and Rs.54,000 respectively. After four months R joined the business with a capital of Rs. 30,000. After two more months Q left the business with his capital. At the end of the year P got a share of Rs. 13,500 in the profit. What is the total profit earned?

- (a) Rs 26800
- (b) Rs 27600
- (c) Rs 28600
- (d) Rs 29200
- (e) Rs 32300

Q11. Rohan and Sohan started business with Rs. 1000 and Rs. 1500 respectively. After six month Rohan withdrew  $X\%$  of his investment and Rajni replace Sohan with  $X\%$  of Sohan's Capital. After 1 year Rajni's share of profit is Rs. 2700 out of the total profit Rs. 11400. Find the value of X?

- (a) 60
- (b) 70
- (c) 80
- (d) 10
- (e) 90

Q12. X, Y, Z enter into partnership with capital contribution Rs. 50000, 20000 and 30000 respectively X is working partner therefore get 20% of profit for managing the business. The remaining profit is distributed in the respect of capital. At the end of a year X gets Rs. 300 more than Y and Z then total profit is ?

- (a) Rs. 1200
- (b) Rs. 1700
- (c) Rs. 2200
- (d) Rs. 1500
- (e) None of these

### Solutions

S1. Ans. (a)  
Sol.

Total investment (amount  $\times$  time) of Veer =  $32000 \times 4 + 32000 \times \frac{7}{10} \times 8 = \text{Rs. } 307200$

Total investment (amount  $\times$  time) of Ayush =  $32000 \times \frac{112.5}{100} \times 4 + \left(32000 \times \frac{112.5}{100}\right) \times \frac{120}{100} \times 8$   
= Rs. 489600

Total investment (amount  $\times$  time) of Deepak =  $54000 \times 4 = 216000$

So, profit share ratio of Veer, Ayush and Deepak = 64 : 102 : 45

Required profit difference =  $\frac{73850}{211} \times 19 = \text{Rs. } 6650$

S2. Ans.(c)

Sol.

Let the cost price of both the articles is Rs x & Rs y respectively.

If he earn profit of 12.5% on first article and sold second item on profit of 20%.

ATQ,

$$x \left[ \frac{100+12.5}{100} \right] = y + y \times \frac{20}{100}$$

$$x \times \frac{9}{8} = \frac{6y}{5}$$

$$15x = 16y \quad \dots(i)$$

Also,

Difference of profit of two items is given Rs 10 and we don't know which one is greater, there for two cases are possible...

First when 12.5% profit on cost price x is greater

$$\left( \frac{9x}{8} - x \right) - \left( \frac{6y}{5} - y \right) = 10$$

$$\frac{1}{8}x - \frac{1}{5}y = 10$$

$$5x - 8y = 400$$

Hence it can't be solved with equation (i).

Now assume 20% profit on cost price Y is greater

$$\frac{1}{5}y - \frac{1}{8}x = 10$$

$$8y - 5x = 400$$

On solving we will get

$$y = 150$$

$$x = 160$$

Hence total CP of both articles = Rs. 310.

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S3. Ans.(d)

Sol.

$$\text{Marked price} = \frac{R \times (100+x)}{100}$$

$$\text{SP} = R \times \frac{(100+x)}{100} \times \frac{(100-z)}{100}$$

Atq,

$$R \times \frac{(100+x)}{100} \times \frac{100-z}{100} = R$$

$$\Rightarrow (100+x)(100-z) = 100 \times 100 \quad \dots(i)$$

And,

$$2z = x \quad \dots(ii)$$

From (i) & (ii)

$$z = 50\%$$

S4. Ans.(b)

Sol.

Let the annual Profit be Rs. x.

Negi's salary = Rs. 0.4x

Negi's share in profit =  $\frac{x-0.4x}{2} = \text{Rs. } 0.3x$

Negi's total share = Rs. 0.7x

Atul's share = 0.3x

$$0.3x = 5100 \Rightarrow x = 17000$$

$$0.7x = 11900$$

If the entire profit is divided in the ratio of their investments,

Negi's share = 11900 - 1400 = Rs. 10500.

Atul's share = 17000 - 10500 = Rs. 6500.

$$\therefore \text{Negi's investment} = \frac{10500}{6500} \times 52000 = 84000.$$

S5. Ans (d)

Sol. ATQ

$$\text{S.P.} = 2350 \times \frac{85}{100} \times \frac{75}{100} \times \frac{108}{100}$$

$$= \text{Rs. } 1617.975$$

$$\text{Required \%} = \frac{2350-1617.975}{2350} \times 100 = 31.15\%$$

S6. Ans.(b)

Sol. CP of 150 calculators = 150 × 250 = Rs. 37500

Total CP = 37500 + 2500 = Rs. 40000

MP of 150 calculators = 150 × 320 = Rs. 48000.

SP after discount = 48000 ×  $\frac{95}{100}$  = Rs. 45600.

$$\therefore \text{Percentage profit} = \frac{45600-40000}{40000} \times 100 = 14\%$$

S7. Ans (a)

Sol. Let cost price of camera be Rs 100x.

So, selling price of camera = Rs 105x.

ATQ

$$105x + 120 = 100x \times \frac{115}{100}$$

$$105x + 120 = 115x$$

$$10x = 120$$

$$x = 12$$

So, cost price of camera = Rs 1200

$$\therefore \text{Required price} = 1200 \times \frac{110}{100} = \text{Rs } 1320$$

S8. Ans. (c)

Sol. Let the per unit variable cost be Rs. y

$$\text{So, } x + 60,000 \times y = 9 \times 60,000$$

$$x + 60,000y = 5,40,000 \quad \text{---(i)}$$

Now,

$$x + 1,00,000 \times y = 1,00,000 \times 7.4$$

$$x + 1,00,000y = 7,40,000 \quad \text{---(ii)}$$

Subtract (i) from (ii)

$$x + 1,00,000y = 7,40,000$$

$$x + 60,000y = 5,40,000$$

$$\hline 40,000y = 2,00,000$$

So, y = Rs. 5/unit

Put value of y in (i)

$$x + 60,000 \times 5 = 5,40,000$$

$$\Rightarrow x = \text{Rs. } 2,40,000$$

$$\text{Now, required per unit price} = \frac{\frac{120}{100}[2,40,000 + 5 \times 80,000]}{80,000}$$

$$= \frac{\left(\frac{120}{100} \times 6,40,000\right)}{80,000}$$

$$= \frac{7,68,000}{80,000}$$

$$= \text{Rs. } 9.6/\text{unit}$$

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S9. Ans(c)

Sol:

Let the marked price of article A and B be Rs 3y and 4y respectively

ATQ

$$\frac{4y \times (100 - (x+8))}{100} \times \frac{100}{120} = \frac{3y \times (100 - x)}{100}$$

$$x = 20$$

Now,

$$\frac{3y \times 90 \times 60}{100 \times 100} = 972$$

$$y = 600$$

Marked price of article B = Rs 2400

S10. Ans. (b)

Sol. P — 45000 × 12

Q — 54000 × 6

R — 30000 × 8

Ratio of their profit = 45 : 27 : 20

$$\therefore \text{Total profit earned} = \frac{92}{45} \times 13500$$

$$= 27600 \text{ Rs}$$

S11. Ans.(a)

Sol.

Investment ratio of Rohan, Sohan and Rajni is

	Rohan	Sohan	Rajni
First 6 months	$1000 \times 6$	$1500 \times 6$	-
Second 6 months	$\frac{1000 \times (100 - X) \times 6}{100}$	-	$\frac{1500 \times (X) \times 6}{100}$
	$6000 + (6000 - 60X)$	9000	90X
Required ratio →	$400 - 2X$	300	3X

ATQ →

$$\frac{3X}{400 - 2X + 300 + 3X} = \frac{2700}{11400}$$

$$\Rightarrow X = 60$$

S12. Ans.(d)

Sol.

Ratio of investment of X, Y and Z.

$$= 50 : 20 : 30 = 10 : 4 : 6$$

Let total profit be 100%

after 20% given to X

$$\text{Value of 1 unit} = \frac{80\%}{20} = 4\%$$

$$(20 + 10 \times 4 - (6+4) \times 4)\% \text{ total profit} = 300$$

$$\therefore \text{total profit} = \text{Rs. } 1500$$