

Quiz Date: 10th June 2020

Q1. A tradesman gives 4% discount on the marked price and gives 1 article free for buying every 15 articles and thus gains 35%. The marked price is increased above the cost price by:

- (a) 40%
- (b) 39%
- (c) 50%
- (d) 20%
- (e) 30%

Q2. The difference between a discount of 35% and two successive discounts of 20% on a certain bill was Rs. 22. Find the amount of the bill.

- (a) Rs. 200
- (b) Rs. 1100
- (c) Rs. 2200
- (d) Rs. 2400
- (e) Rs. 2150

Q3. Two barrels contain a mixture of petrol and diesel. The content of petrol is 40% in the first barrel and 70% in the second barrel. In what ratio must the mixtures from the first and the second barrels be taken to form a mixture containing 55% diesel?

- (a) 1 : 5
- (b) 5 : 1
- (c) 3 : 2
- (d) 5 : 3
- (e) 5 : 6

Q4. A person sold a chair and a table each in an amount of Rs.15000. At table he got a profit of 20% and at chair he lost 25%. Find how much was his total profit or loss?

- (a) Profit of Rs 3000
- (b) Loss of Rs 3000
- (c) Profit of Rs 2500
- (d) Loss of Rs 2500
- (e) None of these

Q5. One type of liquid contains 25% of milk, the other contains 30% of milk. A container is filled with 6 parts of the first liquid and 4 parts of the second liquid. The percentage of milk in the mixture is:

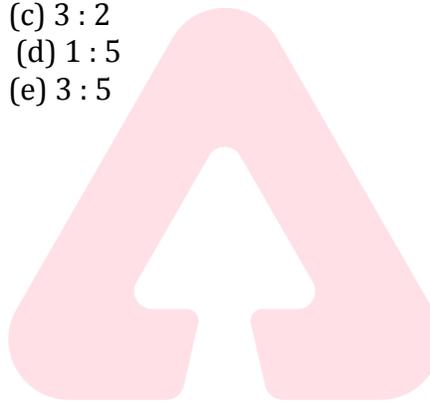
- (a) 27%
- (b) 31%
- (c) 29%
- (d) 33%
- (e) 36%

Q6. Two gallons of a mixture of spirit and water contain 12% of water. They are added to 3 gallons of another mixture, containing 7% of water and half a gallon of water is then added to the whole. Find the percentage of water in the resulting mixture.

- (a) $17\frac{3}{11}\%$
- (b) $16\frac{12}{11}\%$
- (c) $14\frac{1}{11}\%$
- (d) $18\frac{2}{11}\%$
- (e) None of these

Q7. A goldsmith has two qualities of gold, one of 24 carats and another of 32 carats purity. In what proportion should he mix both the type of gold to make an ornament of 30 carats purity?

- (a) 1 : 3
- (b) 2 : 3
- (c) 3 : 2
- (d) 1 : 5
- (e) 3 : 5



Q8. A vessel contains 100 litres mixture of milk and water in the respective ratio of 22 : 3. 40 litres of the mixture is taken out from the vessel and 4.8 litres of pure milk and pure water each is added to the remaining quantity of mixture. By what percent quantity of water is less than the quantity of milk?

- (a) $78\frac{1}{2}$
- (b) $79\frac{1}{6}$
- (c) $72\frac{5}{6}$
- (d) 76
- (e) $77\frac{1}{2}$

Q9. The manufacturer of an article makes a profit of 6%, the wholesale dealer makes a profit of 15%, and the retailer makes a profit of 20%. Find the manufacturing price of the article if the retailer sold it for Rs. 10,971.

- (a) Rs. 8000
- (b) Rs. 7500
- (c) Rs. 7000
- (d) Rs. 7950
- (e) Rs. 8500

Q10. The ratio of milk and water in a vessel is 4 : 1. If 10 litre milk and 20 litre water is mixed in the vessel, the ratio of milk to water becomes 5 : 3. How many litre of milk and water was in the vessel initially?

- (a) 40 litre milk, 10 litre water
- (b) 80 litre milk, 20 litre water
- (c) 140 litre milk, 30 litre water
- (d) 50 litre milk, 30 litre water
- (e) None of these

Q11. In a vessel a mixture contains milk, water and spirit in the ratio 4 : 5 : 3 respectively. In another vessel a mixture contains water and spirit in the ratio 7 : 3. If 4 litre mixture from first vessel is mixed with 5 litre mixture from second vessel. Find the part of spirit in the new mixture?

- (a) $\frac{7}{18}$
- (b) $\frac{5}{18}$
- (c) $\frac{1}{3}$
- (d) $\frac{13}{18}$
- (e) $\frac{11}{18}$

Q12. In a mixture of 60 litres, the ratio of milk to water is 2 : 1. If the ratio of milk to water is to be 1 : 2, then amount of water (in litres) to be further added is

- (a) 20
- (b) 40
- (c) 60
- (d) 80
- (e) none of these

Q13. How many litres of a 30% alcohol solution should be added to 40 litres of a 60% alcohol solution to prepare a 50% solution ?

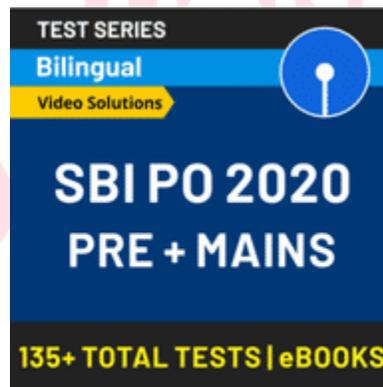
- (a) 30
- (b) 20
- (c) 24
- (d) 32
- (e) none of these

Q14. Samant bought a microwave oven and paid 10% less than the original price. He sold it with 30% profit on the price he had paid. What percentage of profit did Samant earn on the original price ?

- (a) 17%
- (b) 20%
- (c) 27%
- (d) 32%
- (e) 40%

Q15. A person buys a car in Rs 3.2 lakhs. After two years the price of car reduces by 25% of its original price. He spends Rs 40,000 on maintenance of it and sells it at 30% profit on its new cost price. Find, selling price of car by man is what percent of its original cost price to man?

- (a) $113\frac{1}{2}\%$
- (b) $131\frac{3}{4}\%$
- (c) $113\frac{1}{4}\%$
- (d) $113\frac{3}{4}\%$
- (e) $117\frac{3}{4}\%$



Solutions

S1. Ans.(c)

Sol.

Let, MP of 1 article = Rs. 10

MP of 15 article = Rs. 150

SP = Rs. 144 of 16 article

SP of 1 article = Rs. 9

CP of 1 article = $\frac{9}{135} \times 100 = \frac{20}{3}$

CP of 15 article = Rs. 100

So, required percentage

= $\frac{150-100}{100} \times 100 = 50\%$

S2. Ans.(c)

Sol.

$$\frac{65x}{100} - \frac{80}{100} \times \frac{80}{100} x = 22$$

$$\Rightarrow x = \text{Rs. } 2200$$

S3. Ans.(b)

Sol.

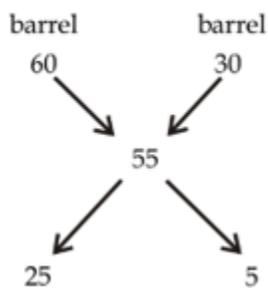
$$\text{Disel in fist barrel} = 100 - 40$$

$$= 60\%$$

$$\text{Disel in second barrel} = 100 - 70 = 30\%$$

According to law of mixture

Disel in first Disel in second



$$\therefore \text{Required ratio} = \frac{25}{5}$$

$$= 5 : 1$$

S4. Ans.(d)

Sol.

Total cost price

$$= 15000 \times \frac{100}{120} + 15000 \times \frac{100}{75}$$

$$= 12500 + 20000$$

$$= 32,500$$

Total profit or loss to the person

$$= 32500 - 30000$$

$$= 2500 \text{ loss}$$

S5. Ans.(a)

Sol.

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Let total capacity of container = 10

So, milk from first liquid = $6 \times \frac{25}{100} = 1.5$

And, milk from 2nd liquid = $4 \times \frac{30}{100} = 1.2$

Total milk = $1.5 + 1.2 = 2.7$

Required answer = $\frac{2.7}{10} \times 100 = 27\%$

S6. Ans.(a)

Sol.

First mixture, total = 2 gallon

Water = $2 \times \frac{12}{100} = 0.24$

2nd mixture, total = 3 gallon

Water = $3 \times \frac{7}{100} = 0.21\%$

Total mixture = $2 + 3 + \frac{1}{2} = \frac{11}{2}$ gallon

Water = $0.24 + 0.21 + 0.50 = 0.95$ gallon

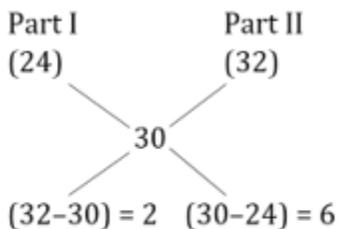
Required answer = $\frac{0.95 \times 100}{5.5} = 17 \frac{3}{11}\%$



S7. Ans.(a)

Sol.

According to the rule of allegation,



∴ Required ratio = Part I : Part II
= 2 : 6 = 1 : 3

S8. Ans.(b)

Sol.

Initial quantity of milk

$$= 100 \times \frac{22}{25}$$

$$= 88 \ell$$

And that of water = $100 - 88 = 12\ell$

Quantity of milk in 60 ℓ of mixture

$$= 60 \times \frac{22}{25}$$

$$= 52.8 \ell$$

and that of water = 7.2ℓ

Now, new quantity of milk and water

Milk	Water
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$52.8 + 4.8$	$7.2 + 4.8$
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$= 57.6 \ell$	$= 12 \ell$
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New ratio of milk and water

$$= 57.6 : 12$$

$$= 24 : 5$$

$$\therefore \text{Required percentage} = \frac{19}{24} \times 100 = 79\frac{1}{6}\%$$

S9. Ans.(b)

Sol.

Manufacturing price

$$= 10,971 \times \frac{100}{106} \times \frac{100}{115} \times \frac{100}{120}$$

$$= \text{Rs } 7,500$$

S10. Ans.(a)

Sol.

Let initially milk in the vessel = $4x$

Water = x

$$\text{ATQ, } \frac{4x+10}{x+20} = \frac{5}{3}$$

$$\Rightarrow 12x + 30 = 5x + 100$$

$$\Rightarrow x = 10 \text{ litres}$$

\therefore Initial quantity of milk and water

$$= 40 \text{ L, } 10\text{L}$$

S11. Ans.(b)

Sol.

Part of spirit in new mixture

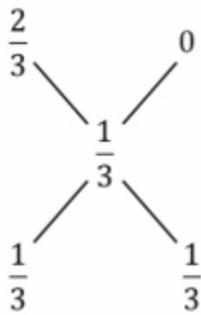
$$\begin{aligned}
 &= \frac{4 \times \frac{3}{12} + 5 \times \frac{3}{10}}{9} \\
 &= \frac{1 + 1.5}{9} \\
 &= \frac{2.5}{9} \\
 &= \frac{25}{90} \\
 &= \frac{5}{18}
 \end{aligned}$$

S12. Ans.(c)

Sol.

Apply the allegation on fraction of milk in each mixture.

Mixture Water



Ratio of mixture to water = 1 : 1

Therefore, if there is 60 litre of solution, 60 litres of water should be added.

Alternately

Quantity of milk and water initially in mixture is 40 l and 20 l respectively

Let x be the required quantity of water added

$$\begin{aligned}
 \text{So, } \frac{40}{20+x} &= \frac{1}{2} \\
 \Rightarrow 80 &= 20 + x \\
 \Rightarrow x &= 60 \text{ l}
 \end{aligned}$$

S13. Ans.(b)

Sol.

Required litres of solution

$$\begin{array}{ccc}
 60 & & 30 \\
 & \diagdown & / \\
 & 50 & \\
 & / & \diagdown \\
 20 & & 10
 \end{array}$$

$$= \frac{40}{2} = 20 \text{ litres}$$

S14. Ans.(a)

Sol.

Let original price = Rs. 100.

Then C.P. = Rs. 90,

S. P. = 130% of Rs. 90

$$= \text{Rs.} \left(\frac{130}{100} \times 90 \right) = \text{Rs.} 117$$

∴ Required percentage

$$= (117 - 100)\% = 17\%.$$

S15. Ans.(d)

Sol.

New cost price of car to man

$$= \left(3.2 \times \frac{75}{100} + 0.4 \right) \text{ lakhs}$$

$$= 2.8 \text{ lakhs}$$

$$\therefore \text{selling price by man} = 2.8 \times \frac{130}{100}$$

$$= 3.64 \text{ lakh}$$

$$\therefore \text{Required percentage} = \frac{3.64}{3.2} \times 100$$

$$= 113.75\%$$

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