

Quiz Date: 5<sup>th</sup> July 2020

Q1. A starts a business with an investment of Rs 72000. After T months, B joined him with an investment of Rs 60000. If at the end of the year profit share of B is Rs 6500 out of total profit of Rs 25220, then find the value of T.

- (a) 4 months
- (b) 5 months
- (c) 6 months
- (d) 7 months
- (e) 8 months

Q2. Dharmender and Shivam started a partnership business. Dharmender and Shivam invested Rs 48000 and Rs 54000 respectively. Dharmender gets 15% of total profit as he is working partner and remaining profit divided by them in proportion to their capital. What is the profit of Shivam, if total profit is Rs 80000?

- (a) Rs 42000
- (b) Rs 48000
- (c) Rs 36000
- (d) Rs 52000
- (e) Rs 44000

Q3. Sumit and Rohan invest into a partnership for  $\frac{4}{5}$ th and  $\frac{3}{4}$ th of time. If Sumit and Rohan invested Rs. 5000 and Rs. 8000 respectively. Find profit share of Rohan is how much percent more/less than profit share of Sumit?

- (a) 33.33%%
- (b) 25%%
- (c) 50%
- (d) 100%
- (e) 66.67%

Q4. Ratio of investment of A and B in a business is 5 : 6. If A invested for 4 months and B for 'T' months then ratio of profit of A to total profit is 2 : 5. Find value of 'T'?

- (a) 7 months
- (b) 5 months
- (c) 4 months
- (d) 6 months
- (e) 8 months

Q5. P and Q entered into partnership. P made an investment in the ratio of 3 : 5 for first four months and for next six months respectively, while Q invested Rs. 1800 for whole year. If P and Q got profit share in the ratio of 7 : 9 at the end of year then find amount invested by P for next six months ?

- (a) 1800 Rs.
- (b) 2000 Rs.
- (c) 1600 Rs.

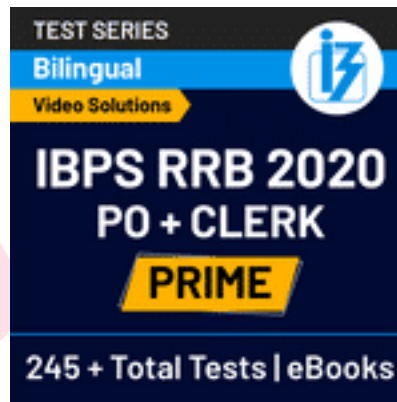
- (d) 2200 Rs.  
(e) 2400 Rs.

Q6. Two alloys containing nickel: aluminum: tin and nickel: tin in ratio 1:2:3 and 3:2 respectively are mixed in ratio 6:5 respectively to form another alloy so that tin in final alloy becomes 60 kg, find quantity of aluminum in final alloy?

- (a) 30 kg  
(b) 24 kg  
(c) 20 kg  
(d) 15 kg  
(e) None of these.

Q7. Hemant mixed two type of sugar i.e. 23 kg of Rs. 50 per kg and 17 kg of Rs. 46 per kg. At what price of per kg mixture of sugar was sold so that he incurred 60% loss?

- (a) Rs. 18  
(b) Rs. 22.04  
(c) Rs. 17  
(d) Rs. 19.32  
(e) None of these



Q8. 50% of a mixture containing water and Sulphuric acid in ratio 1 : 2 is mixed with 40% of another mixture containing alcohol and water in ratio 3 : 2 so that ratio of alcohol: water : Sulphuric acid becomes 12 : 13 : 10 in the final mixture. If Sulphuric acid in initial mixture is 40 liter, Find total quantity of water and alcohol in final mixture?

- (a) 25 liters  
(b) 50 liters  
(c) 75 liters  
(d) 15 liters  
(e) None of these

Q9. A and B started a business in a partnership by investing Rs. 22000 and Rs. 33000 after 3 months B left from the partnership and C joined by Rs. 132000. At the end of the year there was a profit of Rs. 14100. Find the profit of C (in Rs.)?

- (a) Rs. 10800  
(b) Rs. 20400  
(c) Rs. 25300

- (d) Rs. 12300
- (e) Rs. 11800

Q10. A began a business with Rs. 9000 and was joined afterwards by B with Rs.8800. At the end of the year profit were divided into the ratio of 15:11. after how much time B joined the business.

- (a) 9 months
- (b) 8 months
- (c) 4 months
- (d) 3 months
- (e) 5 months

Q11. A and B are partners in a business, A contributes  $\frac{1}{7}$ th of the total Capital invested for 12 month and B received  $\frac{9}{11}$ th of the total profit. For how long does B money has invested in the business?

- (a) 8 months
- (b) 6 months
- (c) 9 months
- (d) 3 months
- (e) 5 months

Q12. A, B and C start a business jointly. Four times investment of A is equal to 7 times the investment of B and the investment of B is four times the investment of C. Find the share of C in annual profit of Rs.190800

- (a) Rs. 34800
- (b) Rs. 44300
- (c) Rs. 19800
- (d) Rs. 26900
- (e) Rs. 15900

Q13. In a mixture, the ratio of the milk and water is 6:7. When 13lit mixture is replaced by water, the ratio becomes 36:55 find the initial quantity of mixture.

- (a)80 lit
- (b)87 lit
- (c)90 lit
- (d)92 lit
- (e)91 lit

Q14. Gold and silver are in the ratio 3:5 in 320 gms of an alloy, find the quantity of silver to be added to it to make the ratio 1:3.

- (a)160 gms
- (b)155 gms
- (c)167 gms
- (d)176 gms
- (e)184 gms

Q15. 27 kg of rice A which costs 184 Rs/kg was mixed with a certain amount of another type of rice B, which costs was 248 Rs/kg. Then the mixture was sold at 252 Rs/kg and at  $16\frac{2}{3}\%$  profit was earned. What was the quantity of type B rice to be mixed in the mixture?

- (a) 25 kg  
 (b) 26 kg  
 (c) 27 kg  
 (d) 28 kg  
 (e) 54 kg

### Solutions

S1. Ans (d)

Sol. Ratio of profit share of A and B

$$\begin{aligned} \frac{A}{B} &= \frac{72000 \times 12}{60000 \times (12 - T)} = \frac{(25220 - 6500)}{6500} \\ &= \frac{72}{60 - 5T} = \frac{18720}{6500} \\ &= 1800 = 4320 - 360T \\ T &= 7 \text{ months} \end{aligned}$$



S2. Ans(c)

Sol. Let total profit be Rs 100x.

Ratio of profit share of Dharmender and Shivam for remaining profit =  $\frac{48000}{54000} = \frac{8}{9}$

$$\text{Profit of Shivam} = \left(80000 - \frac{15}{100} \times 80000\right) \times \frac{9}{17} = 68000 \times \frac{9}{17} = \text{Rs } 36000$$

S3. Ans(c)

Sol. Let total time of investment is 20x months

Ratio of profit share of Sumit to Rohan

$$5000 \times 20x \times \frac{4}{5} : 8000 \times 20x \times \frac{3}{4}$$

2: 3

$$\text{Required percentage} = \frac{3-2}{2} \times 100 = 50\%$$

S4. Ans.(b)

Sol.

Let investment of A and B be Rs  $5x$  and Rs  $6x$  respectively.

Ratio of profit =  $5x \times 4 : 6x \times T$

ATQ,

$$\frac{20x}{20x+6xT} = \frac{2}{5}$$

$$100x = 40x + 12xT$$

$$60x = 12xT$$

$$\therefore T = 5 \text{ months}$$

S5. Ans(b)

Sol.

Let P invested  $3P$  &  $5P$  for first four month and for next six months respectively

ATQ –

$$\frac{3P \times 4 + 5P \times 6}{42P} = \frac{7}{9}$$

$$\frac{1800 \times 12}{21600} = \frac{7}{9}$$

$$6P = 2400$$

$$P = 400 \text{ Rs.}$$

Amount Invested by P for next six months =  $5 \times 400 = 2000 \text{ Rs.}$

S6. Ans(b)

Sol. let total quantity of two alloys are =  $6x$  and  $5x \text{ kg}$

ATQ

$$6x \times \frac{3}{6} + 5x \times \frac{2}{5} = 60$$

$$5x = 60$$

$$x = 12$$

$$\begin{aligned} \text{Required quantity of aluminum} &= 6x \times \frac{2}{6} = 2x \\ &= 2 \times 12 \\ &= 24 \text{ kg} \end{aligned}$$

S7. Ans.(d)

Sol. Required selling price of mixture

$$= \frac{(50 \times 23 + 46 \times 17)}{23 + 17} \times \frac{40}{100}$$

$$= \frac{1932}{40} \times \frac{40}{100}$$

$$= \text{Rs. } 19.32$$

S8. Ans.(b)

Sol. Let Alcohol, water and sulphuric acid in final mixture are  $12x$ ,  $13x$  and  $10x$  litre respectively.

Quantity of initial mixture containing water and sulphuric acid =  $40 \times \frac{3}{2} = 60 \text{ lit}$

ATQ,

$$10x = 60 \times \frac{50}{100} \times \frac{2}{3}$$

$$10x = 20 \text{ litre}$$

$$x = 2 \text{ litre}$$

$$\text{So, } (12x + 13x) = 25x = 50 \text{ litre.}$$

S9. Ans (a)

Sol.

ATQ,

$$\text{Profit of A, B and C in the ratio} = 22000 \times 12 : 33000 \times 3 : 132000 \times 9 \\ = 8 : 3 : 36$$

$$\text{Profit of C} = \frac{36}{8+3+36} \times 14100 \\ = \text{Rs. } 10800$$

S10. Ans (d)

Sol.

Let B invest Rs. 8800 for t months

ATQ,

$$\text{Profit ratio of A and B} = 9000 \times 12 : 8800 \times t$$

$$\frac{15}{11} = \frac{135}{11t}$$

$$t = 9 \text{ months}$$

so, after 3 months B joined.

S11. Ans (c)

Sol.

Let capital = Rs.  $7x$

$$\text{A's capital} = \frac{1}{7} \times 7x = \text{Rs. } x$$

$$\text{B's capital} = 7x - x = \text{Rs. } 6x$$

Let investment time taken by B = t months

Let total profit = Rs.  $11y$

So, profit of B = Rs.  $9y$

And profit of A = Rs.  $2y$

ATQ,

$$\text{Ratio of Profit of A and B} = x \times 12 : 6x \times t$$

$$\frac{2}{9} = \frac{2}{t}$$

$$\text{So, } t = 9 \text{ months}$$

S12. Ans (e)

Sol.

ATQ,

$$4 \times \text{investment of A} = 7 \times \text{investment of B}$$

And

$$\text{investment of B} = 4 \times \text{investment of C}$$

$$\text{So, } 4 \times \text{capital of A} = 7 \times \text{capital of B} = 28 \times \text{capital of C} = \text{constant}(k)$$

$$\text{Capital of A : Capital of B : Capital of C} = 7 : 4 : 1$$

Since time of investment of A, B and C are same

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So, profit divided into A, B and C in ratio of their capital

$$\text{Profit of C} = \frac{1}{7+4+1} \times 190800$$

$$= \text{Rs.}15900$$

S13. Ans.(e)

Sol. Ratio of milk and water in initial mixture = 6 : 7

When 13 liters mixture are out, Ratio of milk and water in mixture become same = 6 : 7

$$\frac{6x}{7x + 13} = \frac{36}{55}$$

$$55 \times 6x - 36 \times 7x = 36 \times 13$$

$$x = 6$$

$$\begin{aligned} \text{Initial quantity of mixture} &= 6x + 7x + 13 \\ &= 13 \times 6 + 13 \\ &= 91 \text{ litres.} \end{aligned}$$

S14. Ans.(a)

Sol. Let Gold =  $3x$  gms

Silver =  $5x$  gms

$$3x + 5x = 320 \text{ gms} \Rightarrow x = 40$$

So, Gold = 120 gms

Silver = 200 gms

$$\frac{120}{200 + y} = \frac{1}{3}$$

$$y = 160 \text{ gms.}$$

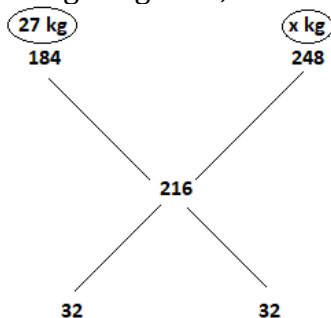
S15. Ans.(c)

Sol. Rate of rice A = 184 Rs/kg

Rate of rice B = 248 Rs/kg

$$\text{Mixture cost price} = 252 \times \frac{100}{100 + 16\frac{2}{3}} = 216 \text{ Rs/Kg}$$

Using allegation,



Ratio of quantity = ratio of difference of cost price

$$\frac{32}{32} = \frac{27}{x} \quad (x \text{ is quantity of rice B})$$

$$x = 27 \text{ kg (quantity of rice B in mixture)}$$

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