

Quiz Date: 15th April 2020

Q1. A jobber buys an article at Rs 24. He then wishes to sell the article at a gain of $33\frac{1}{3}\%$ of his cost after allowing a 20% discount on his marked price. At what price (in Rs) should the article be marked?

- (a) Rs 30.00
- (b) Rs 33.60
- (c) Rs 40.00
- (d) Rs 42.00
- (e) Rs 45.50

Q2. The ratio of the capitals lent for two years under CI annually and for four year under SI is 6 : 5 given that the rate of interest for both is same. When the interest obtained is same, then the value of the rate of interest is

- (a) 145%
- (b) 122.22%
- (c) 135%
- (d) 133.33%
- (e) 143.33%

Q3. A retailer purchased radio sets at the rate of Rs. 400 each from a wholesaler. He marked up the price by 30% and allowed a discount of 8% on each set, then find the profit percentage?

- (a) 19%
- (b) 78.4%
- (c) 22%
- (d) 19.6%
- (e) 16.9%

Q4. A person bought some articles 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 2 rupees. In this business he suffered a loss of Rs. 3. The total number of articles bought by him was

- (a) 1090
- (b) 1080
- (c) 540
- (d) 545
- (e) 554

Q5. A book seller purchased 120 exercise books at the rate of Rs. 3 each and sold $\frac{1}{3}$ of them at the rate of Rs. 4 each, $\frac{1}{2}$ of them at the rate of Rs. 5 each and the rest at the cost price. Then find the total profit percent of book seller?

- (a) 44%
- (b) $44\frac{4}{9}\%$

- (c) $44\frac{2}{3}\%$
- (d) 45%
- (e) 50%

Q6. A sells an article to B making a profit of $\frac{1}{5}$ of his outlay. B sells it to C, gaining 20%. If C sells it for Rs. 600 and incurs a loss of $\frac{1}{6}$ of his outlay, the cost price of A is

- (a) Rs. 600
- (b) Rs. 500
- (c) Rs. 720
- (d) Rs. 800
- (e) Rs. 850

Q7. Ravi borrowed some money at the rate of 4 p.c.p.a for the first three years, at the rate of 8 p.c.p.a for the next two years and at the rate of 9 p.c.p.a for the period beyond 5 years. If he pays a total simple interest of Rs 19550 at the end of 7 years, how much money did he borrow?

- (a) Rs 39500
- (b) Rs 42500
- (c) Rs 41900
- (d) Rs 43000
- (e) Rs 45500

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Q8. Mr. X invested an amount for 2 years at 15 percent per annum at simple interest. Had the interest been compounded annually, he would have earned Rs. 450/- more as interest. What was the amount invested?

- (a) Rs. 22,000
- (b) Rs. 24,000
- (c) Rs. 25000
- (d) Rs. 25500
- (e) Rs. 20000

Q9. Two equal sums of money were invested-one at $4\frac{1}{2}\%$ p.a. and the other at 4% p.a. At the end of 7 years, the simple interest received from the former was exceeded to that received from the latter by Rs 31.50. Each sum was

- (a) Rs 100
- (b) Rs 500
- (c) Rs 750
- (d) Rs 900
- (e) Rs 950

Q10. Find the compound interest at the rate of 10% for 3 years on that principal which in 3 years at the rate of 10% per annum gives Rs 300 as simple interest.

- (a) Rs 331
- (b) Rs 310
- (c) Rs 330
- (d) Rs 333
- (e) Rs 341

Q11. An article is sold at 30% profit. Had it been sold at Rs. 155 more than previous selling price and the cost price were also increased by Rs. 100 then profit would have been 5% more. Then find the CP of the article.

- (a) Rs. 500
- (b) Rs. 400
- (c) Rs. 460
- (d) Rs. 480
- (e) Rs. 540

Q12. A man has Rs. 9000, some of which he deposits in Bank A at 6% S.I. and remaining he deposits in Bank B at 8% S.I.. If the total interest he earns is Rs. 1800 in three years. What is the amount invested at 6%?

- (a) Rs. 3000
- (b) Rs. 6000
- (c) Rs. 4000
- (d) Rs. 4500
- (e) Rs. 5400

Q13. A sum of Rs. 1440 is lent out in three parts in such a way that the interest on first part at 2% for 3 years, second part at 3% for 4 years and third part at 4% for 5 years are equal. Then the difference between the largest and the smallest part is

- (a) Rs. 400
- (b) Rs. 560
- (c) Rs. 460
- (d) Rs. 200
- (e) Rs. 250

Q14. If a sum of money at compound interest doubles itself in 15 years, it will become eight times of itself in

- (a) 60 years
- (b) 48 years
- (c) 54 years

- (d) 45 years
(e) 30 years

Q15. On selling a Pen at 5% loss and a book at 15% gain, Karim gains Rs. 7. If he sells the Pen at 5% gain and the book at 10% gain, then he gains Rs. 13. The actual price of the book is

- (a) Rs. 100
(b) Rs. 80
(c) Rs. 10
(d) Rs. 400
(e) Rs. 180

Solutions

S1. Ans.(c)

Sol.

Let marked price = Rs. x

$$\therefore 24 \times \frac{400}{300} = x \times \frac{80}{100}$$

$$\Rightarrow x = \text{Rs. } 40$$

S2. Ans.(d)

Sol.

Let capitals for C.I. and S.I. are 6x and 5x respectively and rate of interest be r%.

$$\therefore 6x \left[\left(1 + \frac{r}{100} \right)^2 - 1 \right] = \frac{5x \times 4 \times r}{100}$$

$$\Rightarrow 6 \left[\frac{r^2}{10,000} + \frac{r}{50} \right] = \frac{r}{5}$$

$$\Rightarrow \frac{r^2}{10,000} - \frac{r}{30} + \frac{r}{50} = 0$$

$$\Rightarrow \frac{r^2}{10,000} - \frac{2r}{150} = 0$$

$$\Rightarrow \frac{r^2}{10,000} - \frac{r}{75} = 0$$

$$\Rightarrow \frac{r^2}{10,000} = \frac{r}{75}$$

$$\Rightarrow r = 133.33\%$$

S3. Ans.(d)

Sol. According to question,



$$C.p = 400Rs.$$

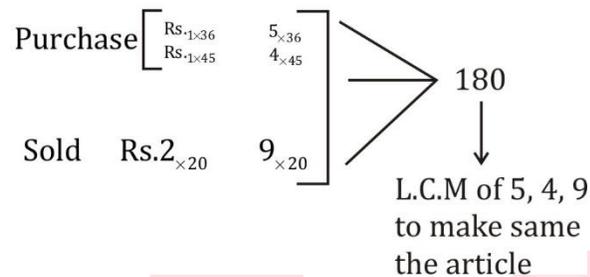
$$M.p = 400 \times \frac{130}{100} = 520Rs.$$

$$\text{Given, } S.p = 520 \times \frac{92}{100} = 478.4Rs.$$

$$\text{profit\%} = \frac{478.4 - 400}{400} \times 100 = 19.6\%$$

S4. Ans.(b)

Sol. According to question,



$$CP = 36 + 45 = 81 \text{ (360 A)}$$

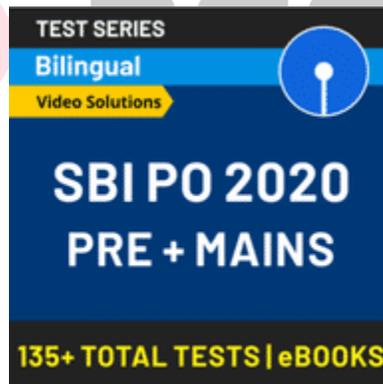
$$SP = 40 \times 2 = 80 \text{ (360 A)}$$

$$\text{Loss} = 81 - 80 = 1 \text{ Rs}$$

1 Rs loss, when 360 articles are are sold

\therefore Total no of articles

$$= 360 \times 3 = 1080$$



S5. Ans.(b)

Sol. According to question

120 Books (3 Rs. each)

$$40\text{books} + 60\text{books} + 20\text{books} = 120\text{books}$$

×	×	×	×3	
<u>Rs. 4 each</u>	<u>Rs. 5 each</u>	<u>Rs. 3 each</u>	<u>360</u>	-CP
Rs. 160	+ Rs. 300	+ Rs. 60	= 520 - SP	

Total, CP = 360
 SP = 520
 Profit = 520 - 360 = 160
 Profit % = $\frac{160}{360} \times 100 = \frac{400}{9} = 44\frac{4}{9}\%$

S6. Ans.(b)

Sol. According to question,

A → B
profit of $\frac{1}{5}$ of his out lay

B → C
20% profit

C → D
loss of $\frac{1}{6}$ of his out lay

5
↓ ×
5
↓ ×
6
150
↓
CP of A

6
↓ ×
6
↓ ×
5
180
↓
SP of C

180 units = 600

1 unit = $\frac{600}{180}$

150 units = $\frac{600}{180} \times 150 = 500$

CP of A = Rs. 500

S7. Ans.(b)

Sol.

Let many borrowed by him was Rs. P

ATQ,

$$\frac{P \times 4 \times 3}{100} + \frac{P \times 8 \times 2}{100} + \frac{P \times 9 \times 2}{100} = 19550$$

⇒ P = Rs. 42,500

S8. Ans.(e)

Sol.

Difference between C.I. & S.I. = 450

$$\text{So, } 450 = \frac{p \times 15 \times 15}{100 \times 100}$$

$$\Rightarrow p = 20000$$

So, amount invested = Rs. 20,000

S9. Ans.(d)

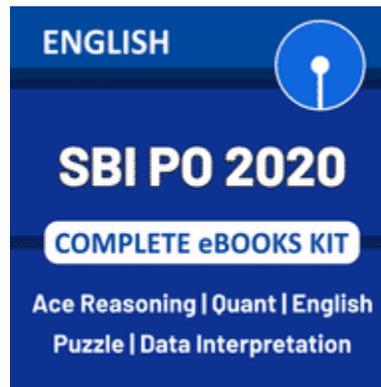
Sol.

Let each sum was Rs. P

$$\therefore \frac{P \times 9 \times 7}{200} - \frac{P \times 4 \times 7}{100} = 31.5$$

$$\Rightarrow P = \frac{31.5 \times 200}{7}$$

$$\Rightarrow P = 900 \text{ rupees}$$



Bankers

S10. Ans.(a)

Sol.

Let sum = Rs P

$$\therefore P = \frac{300 \times 100}{3 \times 10}$$

$$= 1000$$

$$\therefore \text{C.I.} = 1000 \left[\left(1 + \frac{10}{100} \right)^3 - 1 \right]$$

$$= 1000 \times \frac{331}{1000}$$

$$= \text{Rs } 331$$

S11. Ans.(b)

Sol. Let 'CP' of article = 100x

SP of article = 130x

Increased CP = (100x + 100)

Increase SP = (130x + 155)

$$\text{Profit \%} = \frac{(130x + 155) - (100x + 100)}{100x + 100} \times 100 = 35$$

$$35(100x + 100) = (30x + 55) \times 100$$

$$3500x + 3500 = 3000x + 5500$$

$$\Rightarrow x = 4$$

CP of article = Rs. 400

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S12. Ans.(b)

Sol. Let he invests Rs. x in bank A and in bank B it is $(9000 - x)$

ATQ,

$$\frac{x \times 6 \times 3}{100} + \frac{(9000 - x) \times 8 \times 3}{100} = 1800$$

$$\Rightarrow 18x + 2,16,000 - 24x = 1,80,000$$

$$\Rightarrow x = \text{Rs. } 6,000$$

S13. Ans.(b)

Sol. Let three parts are x , y and z respectively.

$$\therefore x + y + z = 1440 \quad \text{---(i)}$$

$$\text{ATQ, } \frac{x \times 2 \times 3}{100} = \frac{y \times 3 \times 4}{100} = \frac{z \times 4 \times 5}{100}$$

$$\Rightarrow 3x = 6y = 10z$$

$$\therefore \text{Ratio of } x, y \text{ and } z = \frac{1}{3} : \frac{1}{6} : \frac{1}{10}$$

$$= 10 : 5 : 3$$

$$\therefore \text{Required difference} = \frac{10-3}{18} \times 1440$$

$$= \text{Rs. } 560$$

S14. Ans.(d)

Sol. Since in 15 years money becomes 2 times.

$$\therefore \text{i.e. } 2^1 \text{ --- } 15 \text{ years}$$

$$\therefore 8 = 2^3 \text{ --- } 15 \times 3 = 45 \text{ years}$$

S15. Ans.(b)

Sol. Let C. P. of pen = Rs. a

C.P. of book = Rs. b

A/C, first condition

$$\frac{15b}{100} - \frac{5a}{100} = 7$$

$$\Rightarrow 3b - a = 140 \quad \text{---(i)}$$

A/c, second condition,

$$5a + 10b = 1300$$

$$\Rightarrow a + 2b = 260 \quad \text{---(ii)}$$

Solving (i) and (ii), we get

$$b = 80 \text{ rupees}$$

