New Pattern Based Quantitative Aptitude Questions For SBI PO 2019 | High Level Quant Quiz for SBI PO

SBI PO Pre Maths Quiz 11

Directions: Read the following questions carefully and choose the right answer.

1. When the price of petrol was increased in the ratio of 5 : 6 then a person decreased the total distance travelled by petrol car in the whole month in the ratio of 4 : 3. Find whether the total monthly expenditures of the person on petrol was decreased or increased?

A. 10% increased   B. 20% increased   C. 10% decreased

D. 20% decreased   E. None of these

2. In a mixture, the ratio of the liquid A and B is 5 : 3 respectively. When 40 litres of mixture were taken out but in place of that 60 litres of liquid B were added then the concentration of liquid A become 66.67% less than that of B. In the original mixture, the quantity of liquid A is how much more than that of B?

A. 24 litres   B. 20 litres   C. 25 litres

D. 15 litres   E. None of these

3. 4 years ago, Saurabh was five times as old as Surbhi and after 10 years, Saurabh become three times as old as Surbhi. When Surbhi was born, what was the age of Saurabh ?

A. 56 years   B. 60 years   C. 64 years

D. 44 years   E. None of these

4. The ratio of the speed of a swimmer in downstream to upstream is 7 : 5. If the rate of stream of river is 1.5 km per hour then how much distance the swimmer will cover in 10 hours in still water? (assume that every time the swimmer swim with his uniform speed)

A. 900 km   B. 450 km   C. 120 km

D. 90 km   E. None of these

5. The diagonal of a rectangle is equal to the diameter of a circle and the perimeter of the rectangle is half of that of the circle. If Area of the circle is 616 sq. units then what is the area of the rectangle (in sq. units)?

A. 148   B. 72   C. 144

D. 288   E. None of these

6. Lotto India (a lottery company) sold 20,000 lottery tickets. If 10 tickets of them will be selected for prize money. If you buy ten tickets of that company then what will be your probability of not getting a prize?

A. 1/2000   B. 999/2000   C. 9999/2000

D. 199/2000   E. None of these

7. A train cover a certain distance at 40 km per hour then it reaches the destination 40 minutes late. What should be the speed of the train to reach the destination on time?

A. km per hour	B.	C. 48 km per hour

D. 50 km per hour   E. Can't be determined

8. Rohit and Mohit took a contract of work for Rs. 4500. If Rohit had worked alone, then he would have taken 5 days more than that of Mohit to complete the work. But actually with the help of Sohit, they together complete the work in 4 days. If the efficiency of Sohit is double of that of Mohit then what would be the difference between the share of Rohit and that of Mohit?

A. Rs. 450	B. Rs. 500	C. Rs. 250

D. Rs. 300   E. None of these

9. The sides of a rectangle are in the ratio of 4 : 7 and the area of the rectangle is 4032 sq. cm. If N number of identical square sheets of sides 6 cm was cut from the rectangle then, the sum of the perimeter of all the square sheets is how much more than that of rectangle?

A. 2828 cm	B. 3240 cm	C. 2424 cm

D. 1894 cm   E. None of these

10. A started a business with an investment of Rs. 15000. At the end of some months, B joined him with an investment of Rs. Y. At the end of one year, the share of B was one – third of that of A. If B had joined him with an investment of Rs. 2Y after 2 more months, then the share of B would have been half of that of A. What is the value of Y?

A. Rs. 10000	B. Rs. 5000	C. Rs. 8000

D. Rs. 7500   E. None of these

Correct answers:

1	2	3	4	5	6	7	8	9	10
C	B	A	D	C	E	A	D	C	D

Explanations:

1.

Let the original price of petrol = 5x

The new price of petrol = 6x

old distance travelled by the person = 4y km

Then, the new distance travelled by him = 3y km

Old expenditures = 5x × 4y = 20xy

New expenditures = 6x × 3y = 18xy

The reqd. % decrease = $\dfrac{(20xy - 18xy) \times 100}{20xy} = \dfrac{200}{20} = 10\%$

Hence, option C is correct.

2.

Let in original mixture, the quantity of A = 5x litres

Then, the quantity of B = 3x litres

When 40 litres of mixture were taken out then the quantity of B in 40 litres

$= \dfrac{3 \times 40}{8} = 15$ litres

And the quantity of A = 40 − 15 = 25 litres

The quantity of A in the new mixture = 5x − 25 litres

The quantity of liquid B in new mixture = 3x − 15 + 60 = 3x + 45 litres
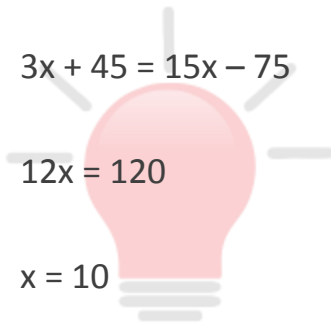
According to the question,

(100 − 66.67)% of (3x + 45) = (5x − 25)

33.33% of (3x + 45) = (5x − 25)

3x + 45 = 15x − 75

12x = 120

x = 10

The required difference = 5x − 3x = 2x = 20 litres

Hence, option B is correct.

3.

Let 4 years ago, Surbhi's age = x years then Saurabh age's = 5x years

After 10 years, Surbhi's age = x + 14 years

Saurabh's age = 5x + 14 years

According to the question,

3 × (x + 14) = 5x + 14

2x = 42 – 14 = 28 years

x = 14 years

At present, Saurabh's age = 5x + 4 = 74 years

Surbhi's age = x + 4 = 18 years

The age of Saurabh when Surbhi was born = 74 – 18 = 56 years

Hence, option A is correct.

4.

Let the speed of swimmer = x km per hour then

The upstream speed = x – 1.5 km per hour

The downstream speed = x + 1.5 km per hour

$$\frac{x + 1.5}{x - 1.5} = \frac{7}{5}$$

$$\frac{x}{1.5} = \frac{12}{2} = \frac{6}{1}$$

x = 9 km per hour

The distance, the swimmer will cover in 10 hours = 10 × 9 = 90 km

Hence, option D is correct.

5.

Area of the circle = 616 sq. units = πr^2

$$\frac{22}{7} \times r^2 = 616$$

$r^2 = 28 \times 7 = 14$ units

The diagonal of the circle = 14 × 2 = 28 units

The perimeter of the circle = $2\pi r = 2 \times \dfrac{22}{7} \times 14 = 88$ units

The perimeter of the rectangle = $\dfrac{88}{2} = 44$ units

Let the length of the rectangle = x units and breadth of the rectangle = y units

The diagonal of the rectangle = $x^2 + y^2 = 14^2 = 196$ units .... (i)

The perimeter of the rectangle = 2 × (x + y) = 44

x + y = 22 units .... (ii)

Squaring the equation (ii)

$x^2 + y^2 + 2xy = 484$

2xy = 484 − 196 = 288

The area of the rectangle = x × y = $\dfrac{288}{2} = 144$ units

Hence, option C is correct.

6.

The probability of getting prize = $\dfrac{10}{20000} = \dfrac{1}{2000}$

Now, the probability of not getting prize = 1 – probability of getting prize

$$= 1 - \frac{1}{2000} = \frac{1999}{2000}$$

Hence, option E is correct.

7.

Let the distance = x km and time = y hours

Distance = speed × time

$$x = 40 \times (y + \frac{2}{3}) = 40 \times \frac{5y}{3}$$

3x = 200y

$$40y = \frac{3x}{5}$$

$$y = \frac{3x}{200} = \text{original time}$$

x = y × speed

$$x = \frac{3x}{200} \times \text{speed}$$

$$\text{Speed} = \frac{200}{3} \text{ km per hour} = 66\frac{2}{3} \text{ km per hour}$$

Hence, option A is correct.

8.

Let the number of days Mohit take = 2x days

The number of days Rohit will take = 2x + 6 days

Efficiency of Sohit = double of that of Mohit

The number of days Sohit will take = $\dfrac{2x}{2}$ = x days

According to the question,

$\dfrac{1}{2x} + \dfrac{1}{2x+5} + \dfrac{1}{x} = \dfrac{1}{4}$

By solving, x = 7.5 days

Rohit's share : Mohit's share : Sohit's share

$= \dfrac{1}{15} : \dfrac{1}{20} : \dfrac{1}{7.5} = 4 : 3 : 8$

The reqd. difference = $\dfrac{4 \times 4500}{15} - \dfrac{3 \times 4500}{15}$ = Rs. 300

Hence, option D is correct.

9.

Let length = 4x cm then breadth = 7x cm

Area = 4x × 7x = 4032

x = 12 cm

The perimeter of the rectangle = 2 (4 × 12 + 7 × 12) = 24 × 11 = 264 cm

The value of N = $\dfrac{\text{area of rectangle}}{\text{area of the square}} = \dfrac{4032}{36}$ = 112

The perimeter of all the square = 6 × 4 × 112 = 2688 cm

The required answer = 2688 − 264 = 2424 cm

Hence, option C is correct.

10.

Let y = 1000x and B joined him only for 'a' months

then the ratio of share = 15 × 12 : x × a = 3 : 1

60 : xa = 1 : 1 .... (i)

If B would have joined after 2 more months

15 × 12: (a – 2) × 2x = 2: 1

90 : (2ax – 4x) = 1 : 1

90 = 2ax – 4x

From the equation (i) ax = 60

90 = 120 – 4x

4x = 30

x = 7.5

y = 1000x = 7500

Hence, option D is correct.