# Book For

## State Bank Of India

भारतीय स्टेट बैंक
**State Bank of India**

## SBI Assistant Aptitude Sample Paper

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**(1) The banker's gain of a certain sum due 2 years hence at 10% per annum is Rs. 24. The present worth is:**

[A] Rs. 480

[B] Rs. 520

[C] Rs. 600

[D] Rs. 960

**Answer : [C]**

**Explanation:**

$\text{T.D.} = \left( \dfrac{\text{B.G. x 100}}{\text{Rate x Time}} \right) = \text{Rs.} \left( \dfrac{24 \times 100}{10 \times 2} \right) = \text{Rs. 120.}$

$\therefore \quad \text{P.W.} = \dfrac{100 \times \text{T.D.}}{\text{Rate x Time}} = \text{Rs.} \left( \dfrac{100 \times 120}{10 \times 2} \right) = \text{Rs. 600.}$

**(2) The banker's discount on Rs. 1600 at 15% per annum is the same as true discount on Rs. 1680 for the same time and at the same rate. The time is:**

[A] 3 months

[B] 4 months

[C] 6 months

[D] 8 months

**Answer : [B]**

**Explanation:**
S.I. on Rs. 1600 = T.D. on Rs. 1680.
∵ Rs. 1600 is the P.W. of Rs. 1680, *i.e.,* Rs. 80 is on Rs. 1600 at 15%.

$\therefore \quad \text{Time} = \left( \dfrac{100 \times 80}{1600 \times 15} \right)_{\text{year}} = \dfrac{1}{3} \text{ year = 4 months.}$

**(3) The banker's discount of a certain sum of money is Rs. 72 and the true discount on the same sum for the same time is Rs. 60. The sum due is:**

[A] Rs. 360

[B] Rs. 432

[C] Rs. 540

[D] Rs. 1080

**Answer : [A]**

**Explanation:**

$\text{Sum} = \dfrac{\text{B.D. x T.D.}}{\text{B.D. - T.D.}} = \text{Rs.} \left( \dfrac{72 \times 60}{72 - 60} \right) = \text{Rs.} \left( \dfrac{72 \times 60}{12} \right) = \text{Rs. 360.}$

**(4) The banker's gain on a bill due 1 year hence at 12% per annum is Rs. 6. The true discount is:**

[A] Rs. 72

[B] Rs. 36

[C] Rs. 54

[D] Rs. 50

**Answer : [D]**

**Explanation:**
T.D. = $\dfrac{\text{B.G. x 100}}{\text{R x T}}$ = Rs. $\left(\dfrac{6 \times 100}{12 \times 1}\right)$ = Rs. 50.

**(5) The true discount on a bill of Rs. 540 is Rs. 90. The banker's discount is:**

[A] Rs. 60

[B] Rs. 108

[C] Rs. 110

[D] Rs. 112

**Answer : [B]**

**Explanation:**
P.W. = Rs. (540 - 90) = Rs. 450.
∵ S.I. on Rs. 450 = Rs. 90.
S.I. on Rs. 540 = Rs. $\left(\dfrac{90}{450} \times 540\right)$ = Rs. 108.

∴ B.D. = Rs. 108.

**(6) If $a - b = 3$ and $a^2 + b^2 = 29$, find the value of $ab$.**

[A] 10

[B] 12

[C] 15

[D] 18

**Answer : [A]**

**Explanation:**
$2ab = (a^2 + b^2) - (a - b)^2$
= 29 - 9 = 20
$\Rightarrow ab = 10.$

**(7) The price of 2 sarees and 4 shirts is Rs. 1600. With the same money one can buy 1 saree and 6 shirts. If one wants to buy 12 shirts, how much shall he have to pay ?**

[A] Rs. 1200

[B] Rs. 2400

[C] Rs. 4800

[D] Cannot be determined

[E] None of these

**Answer : [B]**

**Explanation:**
Let the price of a saree and a shirt be Rs. $x$ and Rs. $y$ respectively.
Then, $2x + 4y = 1600$ .... (i)
    and $x + 6y = 1600$ .... (ii)
Solving (i) and (ii) we get $x = 400$, $y = 200$.
$\because$ Cost of 12 shirts = Rs. (12 x 200) = Rs. 2400.

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**(8) A fires 5 shots to B's 3 but A kills only once in 3 shots while B kills once in 2 shots. When B has missed 27 times, A has killed:**

[A] 30 birds

[B] 60 birds

[C] 72 birds

[D] 90 birds

**Answer : [A]**

**Explanation:**
Let the total number of shots be $x$. Then,
Shots fired by A $= \dfrac{5}{8}x$

Shots fired by B $= \dfrac{3}{8}x$

Killing shots by A $= \dfrac{1}{3}$ of $\dfrac{5}{8}x = \dfrac{5}{24}x$

Shots missed by B $= \dfrac{1}{2}$ of $\dfrac{3}{8}x = \dfrac{3}{16}x$

$\therefore \dfrac{3x}{16} = 27$ or $x = \left(\dfrac{27 \times 16}{3}\right) = 144$.

Birds killed by A $= \dfrac{5x}{24} = \left(\dfrac{5}{24} \times 144\right) = 30$.

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**(9) One-third of Rahul's savings in National Savings Certificate is equal to one-half of his savings in Public Provident Fund. If he has Rs. 1,50,000 as total savings, how much has he saved in Public Provident Fund ?**

[A] Rs. 30,000

[B] Rs. 50,000

[C] Rs. 60,000

[D] Rs. 90,000

**Answer : [C]**

**Explanation:**
Let savings in N.S.C and P.P.F. be Rs. $x$ and Rs. (150000 - $x$) respectively. Then,
$\dfrac{1}{3} x = \dfrac{1}{2}(150000 - x)$

$\Rightarrow \dfrac{x}{3} + \dfrac{x}{2} = 75000$

$\Rightarrow \frac{5x}{6} = 75000$

$\Rightarrow x = \frac{75000 \times 6}{5} = 90000$

$\therefore$ Savings in Public Provident Fund = Rs. (150000 - 90000) = Rs. 60000

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**(10)**
$\frac{(469 + 174)^2 - (469 - 174)^2}{(469 \times 174)} = ?$

[A] 2

[B] 4

[C] 295

[D] 643

**Answer : [B]**

**Explanation:**
Given exp. $= \frac{(a + b)^2 - (a - b)^2}{ab}$

$= \frac{4ab}{ab}$

$= 4$ (where $a = 469$, $b = 174$.)

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**(11) The difference between a two-digit number and the number obtained by interchanging the positions of its digits is 36. What is the difference between the two digits of that number?**

[A] 3

[B] 4

[C] 9

[D] Cannot be determined

[E] None of these

**Answer : [B]**

**Explanation:**
Let the ten's digit be $x$ and unit's digit be $y$.
Then, $(10x + y) - (10y + x) = 36$
$\Rightarrow 9(x - y) = 36$
$\Rightarrow x - y = 4$.

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**(12) If one-third of one-fourth of a number is 15, then three-tenth of that number is:**

[A] 35

[B] 36

[C] 45

[D] 54

**Answer : [D]**

**Explanation:**

Let the number be $x$.

Then, $\frac{1}{3}$ of $\frac{1}{4}$ of $x = 15$ $\Leftrightarrow$ $x = 15 \times 12 = 180$.

So, required number = $\left(\frac{3}{10} \times 180\right)$ = 54.

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**(13) The sum of the digits of a two-digit number is 15 and the difference between the digits is 3. What is the two-digit number?**

[A] 69

[B] 78

[C] 96

[D] Cannot be determined

[E] None of these

**Answer : [D]**

**Explanation:**

Let the ten's digit be $x$ and unit's digit be $y$.
Then, $x + y = 15$ and $x - y = 3$ or $y - x = 3$.
Solving $x + y = 15$ and $x - y = 3$, we get: $x = 9$, $y = 6$.
Solving $x + y = 15$ and $y - x = 3$, we get: $x = 6$, $y = 9$.
So, the number is either 96 or 69.
Hence, the number cannot be determined.

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**(14) Find a positive number which when increased by 17 is equal to 60 times the reciprocal of the number.**

[A] 3

[B] 10

[C] 17

[D] 20

**Answer : [A]**

**Explanation:**

Let the number be $x$.

Then, $x + 17 = \frac{60}{x}$

$\Rightarrow x^2 + 17x - 60 = 0$
$\Rightarrow (x + 20)(x - 3) = 0$
$\Rightarrow x = 3$.

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**(15) The product of two numbers is 9375 and the quotient, when the larger one is divided by the smaller, is 15. The sum of the numbers is:**

[A] 380

[B] 395

[C] 400

[D] 425

**Answer : [C]**

**Explanation:**
Let the numbers be $x$ and $y$.

Then, $xy = 9375$ and $\dfrac{x}{y} = 15$.

$$\dfrac{xy}{(x/y)} = \dfrac{9375}{15}$$

$\Rightarrow y^2 = 625$.
$\Rightarrow y = 25$.
$\Rightarrow x = 15y = (15 \times 25) = 375$.
$\therefore$ Sum of the numbers = $x + y = 375 + 25 = 400$.

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**(16) Two numbers are respectively 20% and 50% more than a third number. The ratio of the two numbers is:**

[A] 2 : 5

[B] 3 : 5

[C] 4 : 5

[D] 6 : 7

**Answer : [C]**

**Explanation:**
Let the third number be $x$.

Then, first number = 120% of $x = \dfrac{120x}{100} = \dfrac{6x}{5}$

Second number = 150% of $x = \dfrac{150x}{100} = \dfrac{3x}{2}$

$\therefore$ Ratio of first two numbers = $\left( \dfrac{6x}{5} : \dfrac{3x}{2} \right) = 12x : 15x = 4 : 5$.

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**(17) If 0.75 : $x$ :: 5 : 8, then $x$ is equal to:**

[A] 1.12

[B] 1.2

[C] 1.25

[D] 1.30

**Answer : [B]**

**Explanation:**
$(x \times 5) = (0.75 \times 8) \Rightarrow x = \left( \dfrac{6}{5} \right) = 1.20$

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**(18) If Rs. 782 be divided into three parts, proportional to $\dfrac{1}{2} : \dfrac{2}{3} : \dfrac{3}{4}$, then the first part is:**

[A] Rs. 182

[B] Rs. 190

[C] Rs. 196

[D] Rs. 204

**Answer : [D]**

**Explanation:**
Given ratio = $\frac{1}{2} : \frac{2}{3} : \frac{3}{4}$ = 6 : 8 : 9.

$\therefore$ 1$^{st}$ part = Rs. $\left( 782 \times \frac{6}{23} \right)$ = Rs. 204

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**(19) Two number are in the ratio 3 : 5. If 9 is subtracted from each, the new numbers are in the ratio 12 : 23. The smaller number is:**

[A] 27

[B] 33

[C] 49

[D] 55

**Answer : [B]**

**Explanation:**
Let the numbers be $3x$ and $5x$.

Then, $\frac{3x - 9}{5x - 9} = \frac{12}{23}$

$\Rightarrow 23(3x - 9) = 12(5x - 9)$
$\Rightarrow 9x = 99$
$\Rightarrow x = 11.$
$\therefore$ The smaller number = (3 x 11) = 33.

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**(20) The fourth proportional to 5, 8, 15 is:**

[A] 18

[B] 24

[C] 19

[D] 20

**Answer : [B]**

**Explanation:**
Let the fourth proportional to 5, 8, 15 be $x$.
Then, 5 : 8 : 15 : $x$
$\Rightarrow 5x = (8 \times 15)$
$x = \frac{(8 \times 15)}{5} = 24.$

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