## Book For

## Bank of Baroda



## BOB Peon Aptitude Sample Paper

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(1) 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.
$\therefore$ Rs. 1600 is the P.W. of Rs. 1680 , i.e., Rs. 80 is on Rs. 1600 at $15 \%$.
$\therefore$ Time $=\left(\frac{100 \times 80}{1600 \times 15}\right)_{\text {year }}=\frac{1}{3}$ year $=4$ months.
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(2) The banker's discount on a bill due 4 months hence at $\mathbf{1 5 \%}$ is Rs. $\mathbf{4 2 0}$. The true discount is:
[A] Rs. 400
[B] Rs. 360
[C] Rs. 480
[D] Rs. 320

## Answer : [A]

Explanation:
T.D. $=\frac{\text { B.D. } \times 100}{100+(R \times T)}$

$$
\begin{aligned}
& =\text { Rs. }\left[\frac{420 \times 100}{100+\left(15 \times \frac{1}{3}\right)}\right] \\
& =\text { Rs. }\left(\frac{420 \times 100}{105}\right) \\
& =\text { Rs. } 400 .
\end{aligned}
$$

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(3) The banker's gain on a sum due $\mathbf{3}$ years hence at $\mathbf{1 2 \%}$ per annum is Rs. $\mathbf{2 7 0}$. The banker's discount is:
[A] Rs. 960
[B] Rs. 840
[C] Rs. 1020
[D] Rs. 760
Answer : [C]
Explanation:
T.D. $=\left(\frac{\text { B.G. } \times 100}{R \times T}\right)=$ Rs. $\left(\frac{270 \times 100}{12 \times 3}\right)=$ Rs. 750 .
$\therefore$ B.D. $=$ Rs. $(750+270)=$ Rs. 1020.
(4) 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:
Sum $=\frac{\text { B.D. } \times \text { T.D. }}{\text { B.D. }- \text { T.D. }}=$ Rs. $\left(\frac{72 \times 60}{72-60}\right)=$ Rs. $\left(\frac{72 \times 60}{12}\right)=$ Rs. 360 .

## (5) 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. $=\frac{\text { B.G. } \times 100}{R \times T}=$ Rs. $\left(\frac{6 \times 100}{12 \times 1}\right)=$ Rs. 50.
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(6) Which of the following statements is not correct?
[A] $\log _{10} 10=1$
$[B] \log (2+3)=\log (2 \times 3)$
[C] $\log _{10} 1=0$
[D] $\log (1+2+3)=\log 1+\log 2+\log 3$

## Answer : [B]

## Explanation:

(a) Since $\log _{a} a=1$, so $\log _{10} 10=1$.
(b) $\log (2+3)=\log 5$ and $\log (2 \times 3)=\log 6=\log 2+\log 3$
$\therefore \log (2+3) \neq \log (2 \times 3)$
(c) Since $\log _{a} 1=0$, so $\log _{10} 1=0$.
(d) $\log (1+2+3)=\log 6=\log (1 \times 2 \times 3)=\log 1+\log 2+\log 3$.

So, (b) is incorrect.
(7) If $\log _{10} 2=0.3010$, the value of $\log _{10} 80$ is:
[A] 1.6020
[B] 1.9030
[C] 3.9030
[D] None of these

## Answer : [B]

## Explanation:

$\log _{10} 80=\log _{10}(8 \times 10)$

$$
=\log _{10} 8+\log _{10} 10
$$

$$
=\log _{10}\left(2^{3}\right)+1
$$

$$
=3 \log _{10} 2+1
$$

$$
=(3 \times 0.3010)+1
$$

$$
=1.9030
$$

(8)

If $\log _{x}\left(\frac{9}{16}\right)=-\frac{1}{2}$, then $x$ is equal to:
[A]
$-\frac{3}{4}$
[B]
$\frac{3}{4}$
[C]
$\frac{81}{256}$
[D]
$\frac{256}{81}$
Answer: [D]
Explanation:
$\log _{x}\left(\frac{9}{16}\right)=-\frac{1}{2}$
$\Rightarrow x^{-1 / 2}=\frac{9}{16}$
$\Rightarrow \frac{1}{x}=\frac{9}{16}$
$\Rightarrow \quad x=\frac{16}{9}$
$\Rightarrow x=\left(\frac{16}{9}\right)^{2}$
$\Rightarrow x=\frac{256}{81}$
(9) If $a^{\boldsymbol{x}}=b^{\boldsymbol{y}}$, then:
[A]
$\log \frac{a}{b}=\frac{x}{y}$
[B]
$\frac{\log a}{\log b}=\frac{x}{y}$
[C]
$\frac{\log a}{\log b}=\frac{y}{x}$
[D] None of these
Answer: [C]
Explanation:
$a^{x}=b^{y}$
$\Rightarrow \log a^{x}=\log b^{y}$
$\Rightarrow x \log a=y \log b$
$\Rightarrow \frac{\log a}{\log b}=\frac{y}{x}$.
(10) The value of $\log _{2} 16$ is:
[A]
$\frac{1}{8}$
[B] 4
[C] 8
[D] 16
Answer: [B]

## Explanation:

Let $\log _{2} 16=n$.
Then, $2^{n}=16=2^{4} \Rightarrow n=4$.
$\therefore \log _{2} 16=4$.
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(11) A alone can do a piece of work in 6 days and $B$ alone in 8 days. A and $B$ undertook to do it for Rs. 3200. With the help of C, they completed the work in 3 days. How much is to be paid to $C$ ?
[A] Rs. 375
[B] Rs. 400
[C] Rs. 600
[D] Rs. 800

## Answer : [B]

## Explanation:

C's 1 day's work $=\frac{1}{3}-\left(\frac{1}{6}+\frac{1}{8}\right)=\frac{1}{3}-\frac{7}{24}=\frac{1}{24}$.

A's wages: B's wages: C's wages $=\frac{1}{6}: \frac{1}{8}: \frac{1}{24}=4: 3: 1$.
$\therefore$ C's share (for 3 days) $=$ Rs. $\left(3 \times \frac{1}{24} \times 3200\right)=$ Rs. 400 .
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(12) A can finish a work in 18 days and $B$ can do the same work in 15 days. $B$ worked for 10 days and left the job. In how many days, A alone can finish the remaining work?
[A] 5
[B]
$5 \frac{1}{2}$
[C] 6
[D] 8
Answer : [C]

## Explanation:

B's 10 day's work $=\left(\frac{1}{15} \times 10\right)=\frac{2}{3}$.
Remaining work $=\left(1-\frac{2}{3}\right)=\frac{1}{3}$.

Now, $\frac{1}{18}$ work is done by A in 1 day.
$\therefore \frac{1}{3}$ work is done by A in $\left(18 \times \frac{1}{3}\right)=6$ days.
(13) $P$ can complete a work in 12 days working 8 hours a day. $Q$ can complete the same work in 8 days working 10 hours a day. If both $P$ and $Q$ work together, working 8 hours a day, in how many days can they complete the work?
[A]
$5 \frac{5}{11}$
[B]
$5 \frac{6}{11}$
[C]
$6 \frac{5}{11}$
[D]
$6 \frac{6}{11}$

## Answer: [A]

## Explanation:

$P$ can complete the work in $(12 \times 8)$ hrs. $=96 \mathrm{hrs}$.
Q can complete the work in $(8 \times 10) \mathrm{hrs} .=80 \mathrm{hrs}$.
$\therefore$ P's1 hour's work $=\frac{1}{96}$ and Q's 1 hour's work $=\frac{1}{80}$.
$(P+Q)$ 's 1 hour's work $=\left(\frac{1}{96}+\frac{1}{80}\right)=\frac{11}{480}$.

So, both $P$ and $Q$ will finish the work in $\left(\frac{480}{11}\right)$ hrs.
$\therefore$ Number of days of 8 hours each $=\left(\frac{480}{11} \times \frac{1}{8}\right)=\frac{60}{11}$ days $=5 \frac{5}{11}$ days.
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(14) $A$ and $B$ can do a piece of work in 30 days, while $B$ and $C$ can do the same work in 24 days and $C$ and $A$ in 20 days. They all work together for 10 days when $B$ and $C$ leave. How many days more will $A$ take to finish the work?
[A] 18 days
[B] 24 days
[C] 30 days
[D] 36 days

## Answer : [A]

## Explanation:

$2(A+B+C)$ 's 1 day's work $=\left(\frac{1}{30}+\frac{1}{24}+\frac{1}{20}\right)=\frac{15}{120}=\frac{1}{8}$.

Therefore, $(A+B+C)$ 's 1 day's work $=\frac{1}{2 \times 8}=\frac{1}{16}$.

Work done by A, B, C in 10 days $=\frac{10}{16}=\frac{5}{8}$.
Remaining work $=\left(1-\frac{5}{8}\right)=\frac{3}{8}$.
A's 1 day's work $=\left(\frac{1}{16}-\frac{1}{24}\right)=\frac{1}{48}$.
Now, $\frac{1}{48}$ work is done by A in 1 day.

So, $\frac{3}{8}$ work will be done by A in $\left(48 \times \frac{3}{8}\right)=18$ days.
(15) $A$ and $B$ can complete a work in 15 days and 10 days respectively. They started doing the work together but after 2 days $B$ had to leave and $A$ alone completed the remaining work. The whole work was completed in :
[A] 8 days
[B] 10 days
[C] 12 days
[D] 15 days

Answer : [C]
Explanation:
$(A+B)$ 's 1 day's work $=\left(\frac{1}{15}+\frac{1}{10}\right)=\frac{1}{6}$.
Work done by $A$ and $B$ in 2 days $=\left(\frac{1}{6} \times 2\right)=\frac{1}{3}$.

Remaining work $=\left(1-\frac{1}{3}\right)=\frac{2}{3}$.

Now, $\frac{1}{15}$ work is done by $A$ in 1 day.
$\therefore \frac{2}{3}$ work will be done by a in $\left(15 \times \frac{2}{3}\right)=10$ days.
Hence, the total time taken $=(10+2)=12$ days.
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(16) By investing Rs. 1620 in $8 \%$ stock, Michael earns Rs. 135. The stock is then quoted at:
[A] Rs. 80
[B] Rs. 96
[C] Rs. 106
[D] Rs. 108

## Answer : [B]

Explanation:
To earn Rs. 135, investment = Rs. 1620.
To earn Rs. 8, investment $=$ Rs. $\left(\frac{1620}{135} \times 8\right)=$ Rs. 96 .
$\therefore$ Market value of Rs. 100 stock $=$ Rs. 96.
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(17) A 6\% stock yields $\mathbf{8 \%}$. The market value of the stock is:
[A] Rs. 48
[B] Rs. 75
[C] Rs. 96
[D] Rs. 133.33

## Answer : [B]

Explanation:
For an income of Rs. 8, investment = Rs. 100.
For an income of Rs. 6 , investment $=$ Rs. $\left(\frac{100}{8} \times 6\right)=$ Rs. 75 .
$\therefore$ Market value of Rs. 100 stock $=$ Rs. 75.
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(18) A $\mathbf{1 2 \%}$ stock yielding $\mathbf{1 0 \%}$ is quoted at:
[A] Rs. 83.33
[B] Rs. 110
[C] Rs. 112
[D] Rs. 120
Answer : [D]

## Explanation:

To earn Rs. 10, money invested = Rs. 100.
To earn Rs. 12, money invested $=$ Rs. $\left(\frac{100}{10} \times 12\right)=$ Rs. 120.
$\therefore$ Market value of Rs. 100 stock $=$ Rs. 120 .
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(19)

The cost price of a Rs. 100 stock at 4 discount, when brokerage is $\frac{1}{4} \%$ is:
[A] Rs. 95.75
[B] Rs. 96
[C] Rs. 96.25
[D] Rs. 104.25
Answer : [C]
Explanation:
C.P. $=$ Rs. $\left(100-4+\frac{1}{4}\right)=$ Rs. 96.25
(20) A man invested Rs. 1552 in a stock at 97 to obtain an income of Rs. 128. The dividend from the stock is:
[A] 7.5\%
[B] 8\%
[C] 9.7\%
[D] None of these

## Answer: [B]

## Explanation:

By investing Rs. 1552, income $=$ Rs. 128.
By investing Rs. 97 , income $=$ Rs. $\left(\frac{128}{1552} \times 97\right)=$ Rs. 8.
$\therefore$ Dividend $=8 \%$

