Book For

Central Warehousing Corporation

CWC Intendent (General) Aptitude Sample Paper

(1)
$\frac{\log 8}{\log 8}$ is equal to:

[A]
$\frac{1}{8}$

[B]
$\frac{1}{4}$

[C]
$\frac{1}{2}$

[D]
$\frac{1}{8}$

Answer : [C]

Explanation:

$\frac{\log 8}{\log 8} = \frac{\log (8)^{1/2}}{\log 8} = \frac{\frac{1}{2}\log 8}{\log 8} = \frac{1}{2}$.

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(2) If log 27 = 1.431, then the value of log 9 is:

[A] 0.934

[B] 0.945

[C] 0.954

[D] 0.958

Answer : [C]

Explanation:
log 27 = 1.431
$\Rightarrow$ log (3^3) = 1.431
$\Rightarrow$ 3 log 3 = 1.431
$\Rightarrow$ log 3 = 0.477
$\therefore$ log 9 = log(3^2) = 2 log 3 = (2 x 0.477) = 0.954.

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(3) Which of the following statements is not correct?

[A] $\log_{10} 10 = 1$

[B] log (2 + 3) = log (2 x 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 x 3) = log 6 = log 2 + log 3
$\therefore$ log (2 + 3) $\neq$ log (2 x 3)
(c) Since $\log_a 1 = 0$, so $\log_{10} 1 = 0$.
(d) log (1 + 2 + 3) = log 6 = log (1 x 2 x 3) = log 1 + log 2 + log 3.
So, (b) is incorrect.

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(4) If log 2 = 0.3010 and log 3 = 0.4771, the value of $\log_5 512$ is:

[A] 2.870

[B] 2.967

[C] 3.876

[D] 3.912

Answer : [C]

Explanation:

$\log_5 512 = \frac{\log 512}{\log 5}$

$= \frac{\log 2^9}{\log (10/2)}$

$= \frac{9 \log 2}{\log 10 - \log 2}$

$= \frac{(9 \times 0.3010)}{1 - 0.3010}$

$= \frac{2.709}{0.699}$

$= \frac{2709}{699}$

$= 3.876$

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(5)

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:

$\log_x\left(\frac{9}{16}\right) = -\frac{1}{2}$

$\Rightarrow x^{-1/2} = \frac{9}{16}$

$\Rightarrow \frac{1}{x} = \frac{9}{16}$

$\Rightarrow x = \frac{16}{9}$

$\Rightarrow x = \left(\frac{16}{9}\right)^2$

$\Rightarrow x = \frac{256}{81}$

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(6) 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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(7) A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is :

[A]

$\frac{1}{4}$

[B]

$\frac{1}{10}$

[C]

$\frac{7}{15}$

[D]

$\frac{8}{15}$

Answer : [D]

Explanation:

A's 1 day's work = $\frac{1}{15}$;

B's 1 day's work = $\frac{1}{20}$;

(A + B)'s 1 day's work = $\left(\frac{1}{15} + \frac{1}{20}\right) = \frac{7}{60}$.

(A + B)'s 4 day's work = $\left(\frac{7}{60} \times 4\right) = \frac{7}{15}$.

Therefore, Remaining work = $\left(1 - \frac{7}{15}\right) = \frac{8}{15}$.

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(8) 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 x 8) hrs. = 96 hrs.
Q can complete the work in (8 x 10) hrs. = 80 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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(9) 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.

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(10) A takes twice as much time as B or thrice as much time as C to finish a piece of work. Working together, they can finish the work in 2 days. B can do the work alone in:

[A] 4 days

[B] 6 days

[C] 8 days

[D] 12 days

Answer : [B]

Explanation:
Suppose A, B and C take x, $\frac{x}{2}$ and $\frac{x}{3}$ days respectively to finish the work.

Then, $\left(\frac{1}{x} + \frac{2}{x} + \frac{3}{x}\right) = \frac{1}{2}$

$\Rightarrow \frac{6}{x} = \frac{1}{2}$

$\Rightarrow x = 12$.
So, B takes (12/2) = 6 days to finish the work.

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(11) By investing in $16\frac{2}{3}$% stock at 64, one earns Rs. 1500. The investment made is:

[A] Rs. 5640

[B] Rs. 5760

[C] Rs. 7500

[D] Rs. 9600

Answer : [B]

Explanation:
To earn Rs. $\frac{50}{3}$, investment = Rs. 64.

To earn Rs. 1500, investment = Rs. $\left(64 \times \frac{3}{50} \times 1500\right)$ = Rs. 5760.

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(12) A man buys Rs. 20 shares paying 9% dividend. The man wants to have an interest of 12% on his money. The market value of each share is:

[A] Rs. 12

[B] Rs. 15

[C] Rs. 18

[D] Rs. 21

Answer : [B]

Explanation:
Dividend on Rs. 20 = Rs. $\left(\frac{9}{100} \times 20\right)$ = Rs. $\frac{9}{5}$.

Rs. 12 is an income on Rs. 100.
$\therefore$ Rs. $\frac{9}{5}$ is an income on Rs. $\left(\frac{100}{12} \times \frac{9}{5}\right)$ = Rs. 15.

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(13) 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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(14) Rs. 9800 are invested partly in 9% stock at 75 and 10% stock at 80 to have equal amount of incomes. The investment in 9% stock is:

[A] Rs. 4800

[B] Rs. 5000

[C] Rs. 5400

[D] Rs. 5600

Answer : [B]

Explanation:
Let the investment in 9% stock be Rs. x.
Then, investment in 10% stock = Rs. (9800 - x).
$\frac{9}{75} \times x = \frac{10}{80} \times (9800 - x)$

$\Rightarrow \frac{3x}{25} = \frac{9800 - x}{8}$

$\Rightarrow 24x = 9800 \times 25 - 25x$
$\Rightarrow 49x = 9800 \times 25$
$\Rightarrow x = 5000.$

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(15) A 6% stock yields 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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(16) The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, then the value of x is:

[A] 15

[B] 16

[C] 18

[D] 25

Answer : [B]

Explanation:
Let C.P. of each article be Re. 1 C.P. of x articles = Rs. x.
S.P. of x articles = Rs. 20.
Profit = Rs. (20 - x).
$\therefore \left(\frac{20 - x}{x} \times 100 = 25\right)$

$\Rightarrow 2000 - 100x = 25x$
$125x = 2000$
$\Rightarrow x = 16.$

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(17) Alfred buys an old scooter for Rs. 4700 and spends Rs. 800 on its repairs. If he sells the scooter for Rs. 5800, his gain percent is:

[A]

$4\frac{1}{7}\%$

[B]
$5\frac{5}{11}\%$

[C] 10%

[D] 12%

Answer : [B]

Explanation:
Cost Price (C.P.) = Rs. (4700 + 800) = Rs. 5500.
Selling Price (S.P.) = Rs. 5800.
Gain = (S.P.) - (C.P.) = Rs.(5800 - 5500) = Rs. 300.
Gain % = $\left(\frac{300}{5500} \times 100\right)\%$ = $5\frac{5}{11}\%$

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(18) Some articles were bought at 6 articles for Rs. 5 and sold at 5 articles for Rs. 6. Gain percent is:

[A] 30%

[B]
$33\frac{1}{3}\%$

[C] 35%

[D] 44%

Answer : [D]

Explanation:
Suppose, number of articles bought = L.C.M. of 6 and 5 = 30.
C.P. of 30 articles = Rs. $\left(\frac{5}{6} \times 30\right)$ = Rs. 25.

S.P. of 30 articles = Rs. $\left(\frac{6}{5} \times 30\right)$ = Rs. 36.

$\therefore$ Gain % = $\left(\frac{11}{25} \times 100\right)\%$ = 44%.

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(19) Sam purchased 20 dozens of toys at the rate of Rs. 375 per dozen. He sold each one of them at the rate of Rs. 33. What was his percentage profit?

[A] 3.5

[B] 4.5

[C] 5.6

[D] 6.5

Answer : [C]

Explanation:
Cost Price of 1 toy = Rs. $\left(\frac{375}{12}\right)$ = Rs. 31.25

Selling Price of 1 toy = Rs. 33
So, Gain = Rs. (33 - 31.25) = Rs. 1.75
$\therefore$ Profit % = $\left(\frac{1.75}{31.25} \times 100\right)\%$ = $\frac{28}{5}\%$ = 5.6%

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(20) A man buys a cycle for Rs. 1400 and sells it at a loss of 15%. What is the selling price of the cycle?

[A] Rs. 1090

[B] Rs. 1160

[C] Rs. 1190

[D] Rs. 1202

Answer : [C]

Explanation:

S.P. = 85% of Rs. 1400 = Rs. $\left(\frac{85}{100} \times 1400\right)$ = Rs. 1190