Book For

Central Warehousing Corporation

CWC Asistant Aptitude Sample Paper

(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:

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

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

---

(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.

$\therefore$ Rs. 1600 is the P.W. of Rs. 1680, *i.e.,* Rs. 80 is on Rs. 1600 at 15%.

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

---

(3) The banker's discount on a bill due 4 months hence at 15% is Rs. 420. The true discount is:

[A] Rs. 400

[B] Rs. 360

[C] Rs. 480

[D] Rs. 320

Answer : [A]

Explanation:

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

$$= \text{Rs.} \left[\frac{420 \times 100}{100 + \left(15 \times \frac{1}{3}\right)}\right]$$

$$= \text{Rs.} \left(\frac{420 \times 100}{105}\right)$$

$$= \text{Rs. } 400.$$

---

(4)

The banker's gain on a certain sum due $1\frac{1}{2}$ years hence is $\frac{3}{25}$ of the banker's **discount. The rate percent is:**

[A]
$5\frac{1}{5}\%$

[B]
$9\frac{1}{11}\%$

[C]
$8\frac{1}{8}\%$

[D]
$6\frac{1}{6}\%$

Answer : [B]

Explanation:
Let, B.D = Re. 1.
Then, B.G. = Re. $\frac{3}{25}$.

$\therefore$ T.D. = (B.D. - B.G.) = Re. $\left(1 - \frac{3}{25}\right)$ = Re. $\frac{22}{25}$.

Sum = $\left(\frac{1 \times (22/25)}{1-(22/25)}\right)$ = Rs. $\frac{22}{3}$.

S.I. on Rs. $\frac{22}{3}$ for $1\frac{1}{2}$ years is Re. 1.

$\therefore$ Rate = $\left(\frac{100 \times 1}{\frac{22}{3} \times \frac{3}{2}}\right)\%$ = $\frac{100}{11} = 9\frac{1}{11}\%$.

---

(5) The certain worth of a certain sum due sometime hence is Rs. 1600 and the true discount is Rs. 160. The banker's gain is:

[A] Rs. 20

[B] Rs. 24

[C] Rs. 16

[D] Rs. 12

Answer : [C]

Explanation:
B.G. = $\frac{(T.D.)^2}{P.W.}$ = Rs. $\left(\frac{160 \times 160}{1600}\right)$ = Rs. 16.

---

(6) A hall is 15 m long and 12 m broad. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of four walls, the volume of the hall is:

[A] 720

[B] 900

[C] 1200

[D] 1800

Answer : [C]

Explanation:
$2(15 + 12) \times h = 2(15 \times 12)$
$\Rightarrow h = \frac{180}{27}m = \frac{20}{3}m$.

$\therefore$ Volume = $\left(15 \times 12 \times \frac{20}{3}\right)_{m^3}$ = 1200 m^3.

(7) In a shower, 5 cm of rain falls. The volume of water that falls on 1.5 hectares of ground is:

[A] 75 cu. m

[B] 750 cu. m

[C] 7500 cu. m

[D] 75000 cu. m

Answer : [B]

Explanation:
1 hectare = 10,000 m^2
So, Area = (1.5 x 10000) m^2 = 15000 m^2.
Depth = $\frac{5}{100}$m = $\frac{1}{20}$m.

$\therefore$ Volume = (Area x Depth) = $\left(15000 \times \frac{1}{20}\right)_{m^3}$ = 750 m^3.

(8) A right triangle with sides 3 cm, 4 cm and 5 cm is rotated the side of 3 cm to form a cone. The volume of the cone so formed is:

[A] 12π cm^3

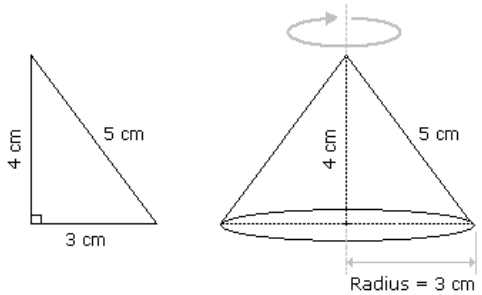
[B] 15π cm^3

[C] 16π cm^3

[D] 20π cm^3

Answer : [A]

Explanation:



Clearly, we have r = 3 cm and h = 4 cm.
$\therefore$ Volume = $\frac{1}{3}\pi r^2 h$ = $\left(\frac{1}{3} \times \pi \times 3^2 \times 4\right)_{cm^3}$ = 12π cm^3.

(9) A metallic sheet is of rectangular shape with dimensions 48 m x 36 m. From each of its corners, a square is cut off so as to make an open box. If the length of the square is 8 m, the volume of the box (in m^3) is:

[A] 4830

[B] 5120

[C] 6420

[D] 8960

Answer : [B]

Explanation:
Clearly, l = (48 - 16)m = 32 m,
b = (36 -16)m = 20 m,
h = 8 m.
$\therefore$ Volume of the box = (32 x 20 x 8) m^3 = 5120 m^3.

(10) A cistern 6m long and 4 m wide contains water up to a depth of 1 m 25 cm. The total area of the wet surface is:

[A] 49 m^2

[B] 50 m^2

[C] 53.5 m^2

[D] 55 m^2

Answer : [A]

Explanation:
Area of the wet surface $= [2(lb + bh + lh) - lb]$

$= 2(bh + lh) + lb$

$= [2\ (4 \times 1.25 + 6 \times 1.25) + 6 \times 4]\ m^2$

$= 49\ m^2$.

(11) A cistern of capacity 8000 litres measures externally 3.3 m by 2.6 m by 1.1 m and its walls are 5 cm thick. The thickness of the bottom is:

[A] 90 cm

[B] 1 dm

[C] 1 m

[D] 1.1 cm

Answer : [B]

Explanation:
Let the thickness of the bottom be x cm.
Then, $[(330 - 10) \times (260 - 10) \times (110 - x)] = 8000 \times 1000$
$\Rightarrow 320 \times 250 \times (110 - x) = 8000 \times 1000$
$\Rightarrow (110 - x) = \frac{8000 \times 1000}{320 \times 250} = 100$

$\Rightarrow x = 10$ cm $= 1$ dm.

(12) 1.5625 = ?

[A] 1.05

[B] 1.25

[C] 1.45

[D] 1.55

Answer : [B]

Explanation:

```
1|1.5625( 1.25
 |1
 |-------
 22| 56
 | 44
 |-------
 245| 1225
 | 1225
 |-------
 |
 X
 |-------
```

$\therefore$ 1.5625 = 1.25.

(13) The cube root of .000216 is:

[A] .6

[B] .06

[C] 77

[D] 87

Answer : [B]

Explanation:

$(.000216)^{1/3} = \left(\frac{216}{10^6}\right)^{1/3}$

$= \left(\frac{6 \times 6 \times 6}{10^2 \times 10^2 \times 10^2}\right)^{1/3}$

$= \frac{6}{10^2}$

$= \frac{6}{100}$

$= 0.06$

---

(14)

What should come in place of both x in the equation $\frac{x}{128} = \frac{162}{x}$.

[A] 12

[B] 14

[C] 144

[D] 196

Answer : [A]

Explanation:

Let $\frac{x}{128} = \frac{162}{x}$

Then $x^2 = 128 \times 162$
$= 64 \times 2 \times 18 \times 9$
$= 8^2 \times 6^2 \times 3^2$
$= 8 \times 6 \times 3$
$= 144.$
$\therefore x = \sqrt{144} = 12.$

---

(15) A group of students decided to collect as many paise from each member of group as is the number of members. If the total collection amounts to Rs. 59.29, the number of the member is the group is:

[A] 57

[B] 67

[C] 77

[D] 87

Answer : [C]

Explanation:

Money collected = (59.29 x 100) paise = 5929 paise.
$\therefore$ Number of members = $\sqrt{5929} = 77.$

---

(16) If $a = 0.1039$, then the value of $4a^2 - 4a + 1 + 3a$ is:

[A] 0.1039

[B] 0.2078

[C] 1.1039

[D] 2.1039

Answer : [C]

Explanation:
$4a^2 - 4a + 1 + 3a = (1)^2 + (2a)^2 - 2 \times 1 \times 2a + 3a$
$= (1 - 2a)^2 + 3a$
$= (1 - 2a) + 3a$
$= (1 + a)$
$= (1 + 0.1039)$
$= 1.1039$

---

(17) Which one of the following is a prime number ?

[A] 119

[B] 187

[C] 247

[D] 551

[E] None of these

Answer : [E]

Explanation:
$551 > 22$
All prime numbers less than 24 are : 2, 3, 5, 7, 11, 13, 17, 19, 23.
119 is divisible by 7; 187 is divisible by 11; 247 is divisible by 13 and 551 is divisible by 19.
So, none of the given numbers is prime.

---

(18) How many terms are there in the G.P. 3, 6, 12, 24, ... , 384 ?

[A] 8

[B] 9

[C] 10

[D] 11

[E] 7

Answer : [A]

Explanation:
Here $a = 3$ and $r = \frac{6}{3} = 2$. Let the number of terms be n.

Then, $t_n = 384 \Rightarrow ar^{n-1} = 384$
$\Rightarrow 3 \times 2^{n-1} = 384$
$\Rightarrow 2^{n-1} = 128 = 2^7$
$\Rightarrow n - 1 = 7$
$\Rightarrow n = 8$
$\therefore$ Number of terms = 8.

---

(19) A number was divided successively in order by 4, 5 and 6. The remainders were respectively 2, 3 and 4. The number is:

[A] 214

[B] 476

[C] 954

[D] 1908

Answer : [A]

Explanation:

4 | x $z = 6 \times 1 + 4 = 10$ ---------- 5 | y -2 $y = 5 \times z + 3 = 5 \times 10 + 3 = 53$ ---------- 6 | z - 3 $x =$

(20) Which one of the following can't be the square of natural number ?

[A] 32761

[B] 81225

[C] 42437

[D] 20164

[E] None of these

Answer : [C]

Explanation:
The square of a natural number never ends in 7.
∴ 42437 is not the square of a natural number.