Profit and Loss
Ex 10C

Q1.

Answer :

List price of the refrigerator = Rs 14650

Sales tax = 6% of Rs 14650

$= \text{Rs}\ \left(14650 \times \frac{6}{100}\right) = \text{Rs}\ \ 879$

Bill amount = Rs $(14650 + 879)$

$= \text{Rs}\ \ 15529$

Hence, the cost of the refrigerator is Rs 15,529.

Q2.

(i)

$\textbf{Cost of the tie} = \textbf{Rs. } 250$

$\textbf{Sales tax} = 6\%\ \textbf{of Rs } 250$

$= \textbf{Rs.}\left(250 \times \frac{6}{100}\right)$

$= \textbf{Rs. } 15$

$\textbf{Hence, bill amount} = \textbf{Rs } (250 + 15)$

$= \textbf{Rs. } 265$

(ii) $\textbf{Cost of the medicines} = \textbf{Rs. } 625$

$\textbf{Sales tax} = 4\%\ \textbf{of Rs. } 625$

$= \textbf{Rs.}\left(625 \times \frac{4}{100}\right)$

$= \textbf{Rs. } 25$

$\textbf{Hence, bill amount} = \textbf{Rs } (625 + 25)$

$= \textbf{Rs } 650$

(iii) $\textbf{Cost of the cosmetics} = \textbf{Rs } 430$

$\textbf{Sales tax} = 10\%\ \textbf{of Rs } 430$

$= \textbf{Rs}\left(430 \times \frac{10}{100}\right)$

$= \textbf{Rs } 43$

$\textbf{Hence, bill amount} = \textbf{Rs } (430 + 43)$

$= \text{Rs. } 473$

(iv) Cost of clothes $= \text{Rs } 1175$

Sales tax $= 8\%$ of Rs 1175

$= \text{Rs } \left(1175 \times \frac{8}{100}\right)$

$= \text{Rs } 94$

Hence, bill amount $= \text{Rs } (1175 + 94)$

$= \text{Rs. } 1269$

Therefore, total amount to be paid by Reena = bill amount of all the four items

$= \text{Rs } (265 + 650 + 473 + 1269)$

$= \text{Rs } 2657$

Q3.

Answer :

Let the original price of the watch be Rs x.

VAT = 10% of Rs x

$= \text{Rs } \left(x \times \frac{10}{100}\right)$

$= \text{Rs } \frac{10x}{100}$

$\therefore$ Price including VAT = $\text{Rs } \left(x + \frac{x}{10}\right)$

$= \text{Rs } \frac{11x}{10}$

Now, $\frac{11x}{10} = 1980$

$\Rightarrow x = \left(1980 \times \frac{10}{11}\right)$

$= 1800$

Hence, the original price of the watch is Rs 1,800.

Q4.

Answer :

Let the original price of the shirt be Rs x.

VAT = 7% of Rs x

$= \text{Rs. } \left(x \times \frac{7}{100}\right)$

$= \text{Rs. } \frac{7x}{100}$

$\therefore$ Price including VAT = $\text{Rs. } \left(x + \frac{7x}{100}\right)$

$= \text{Rs. } \frac{107x}{100}$

Now, $\frac{107x}{100} = 1337.50$

$\Rightarrow x = \text{Rs } \left(1337.50 \times \frac{100}{107}\right)$

$= \text{Rs } 1250$

Hence, the original price of the shirt is Rs 1,250.

Q5.

Answer :

Let the price of 10 g of gold be Rs x.

VAT $= 1\%$ of Rs x

$= \text{Rs } \left(x \times \frac{1}{100}\right)$

$= \text{Rs } \frac{x}{100}$

$\therefore$ Price including VAT $= \text{Rs. } \left(x + \frac{x}{100}\right)$

$= \text{Rs } \frac{101x}{100}$

Now, $\frac{101x}{100} = 15756$

$\Rightarrow x = \text{Rs } \left(15756 \times \frac{100}{101}\right)$

$= \text{Rs } 15600$

Hence, the price of 10 g of gold is Rs 15,600.

Q6.

Answer :

Let the original price of the computer be Rs *x*.

$\mathbf{VAT} = 4\% \ \mathbf{of} \ \mathbf{Rs.}\, x$

$= \mathbf{Rs.}\left(x \times \frac{4}{100}\right)$

$= \mathbf{Rs.}\, \frac{4x}{100}$

∴ Price including VAT $= \mathbf{Rs.}\left(x + \frac{4x}{100}\right)$

$= \mathbf{Rs.}\, \frac{104x}{100}$

$\mathbf{Now,} \ \frac{104x}{100} = 37960$

$\Rightarrow x = \left(37960 \times \frac{100}{104}\right)$

$= 36500$

∴ The original price of the computer is Rs 36,500

Q7.

Answer :

Let the original cost of the spare parts be Rs *x*.

$\text{VAT} = 12\% \ \text{ of } \ \text{Rs}.x \qquad = \text{Rs}.\left(x \times \frac{12}{100}\right) \qquad = \text{Rs}.\frac{12x}{100}$

∴ Price including VAT $= \text{Rs}.\left(x + \frac{12x}{100}\right)$

$= \text{Rs}.\frac{112x}{100}$

Now, $\frac{112x}{100} = 20776 \Rightarrow x = \left(20776 \times \frac{100}{112}\right) \qquad = 18550$

Hence, the original cost of the spare parts is Rs 18,550.

Q8.

Answer :

Let the list price of the TV set be Rs *x*.

$\mathbf{VAT} = 8\% \ \mathbf{of} \ \mathbf{Rs.}\, x$

$= \mathbf{Rs.}\left(x \times \frac{8}{100}\right)$

$= \mathbf{Rs.}\, \frac{8x}{100}$

∴ Price including VAT $= \mathbf{Rs.}\left(x + \frac{8x}{100}\right)$

$= \mathbf{Rs.}\, \frac{108x}{100}$

$\mathbf{Now,} \ \frac{108x}{100} = 27000$

$\Rightarrow x = \left(27000 \times \frac{100}{108}\right)$

$= 25000$

Hence, the list price of the TV set is Rs 25,000.

Q9.

Answer :

Let the rate of VAT be *x*%. Then, we have:

$840 + x\% \ of \ 840 = 882$

$\Rightarrow \left(\frac{x}{100} \times 840\right) = 882 - 840$

$\Rightarrow \frac{84x}{10} = 42$

$\Rightarrow x = \left(42 \times \frac{10}{84}\right)$

$= 5$

∴ The rate of VAT is 5%.

Q10.

Answer :

Let the rate of VAT be *x*%. Then, we have:

$$\begin{aligned}
&18500 + x\%\ of\ 18500 = 19980 \\
&\Rightarrow \left(\frac{x}{100} \times 18500\right) = 19980 - 18500 \\
&\Rightarrow 185x = 1480 \\
&\Rightarrow x = \frac{1480}{185} \\
&\quad = 8
\end{aligned}$$

∴ The rate of VAT is 8%.

Q11.

Answer :

Let the rate of VAT be x%. Then, we have:

$$\begin{aligned}
&34000 + x\%\ of\ 34000 = 382500 \\
&\Rightarrow \left(\frac{x}{100} \times 340000\right) = 382500 - 340000 \\
&\Rightarrow 3400x = 42500 \\
&\Rightarrow x = \frac{42500}{3400} \\
&\quad = 12.5
\end{aligned}$$

∴ The rate of VAT is 12.5%.