

Value Added Tax

EXERCISE-1

Solution - 01

(i) Amount of tax collected by manufacturer

$$A = 10\% \text{ of } 18,000$$

$$= \frac{10}{100} \times 18,000$$

$$= \text{RS. } 1800$$

Since the trader B earns a profit of ₹ 750, the

Value added by the dealer B = ₹ 750.

∴ Amount of VAT paid by B = 10% of ₹ 750.

$$= ₹ 75.$$

As trader C earns a profit of ₹ 900, the

Value added by the dealer C = ₹ 900

∴ Amount of VAT paid by C = 10% of 900

$$= ₹ 90.$$

∴ The amount of tax (under VAT) received by

the state Government = ₹ 1,800 + ₹ 75 + ₹ 90

$$= ₹ 1,965.$$

(ii) The value of the Machine paid by the consumer

$$= ₹ 18,000 + ₹ 750 + ₹ 900$$

$$= ₹ 19,650.$$

Tax paid by the consumer for T.V = 10% of 19,650

$$= ₹ 1,965.$$

The amount paid by the consumer = ₹ 19,650 +

$$₹ 1,965$$

$$= ₹ 21,615.$$

Solution-02.

(i) Amount of tax collected by manufacturer
= 8% of 15,000
= ₹1,200.

Amount of tax received by the government from
whole-saler = 8% of profit since whole-
-saler earns a profit of
= 8% of 1,200 a profit of
= ₹96. ₹1,200

(ii) The value of the machine paid by the
consumer = ₹15,000 + ₹1,200 + ₹1,800
= ₹18,000

Tax paid by the consumer = 8% of ₹18,000
= ₹ $\left(\frac{8}{100} \times 18,000\right)$.
= ₹1,440.

∴ The amount paid by the consumer per
Machine = ₹18,000 + ₹1,440
= ₹19,440.

Solution-03.

Amount paid by the manufacturer for Raw
material = ₹40,000.

Sales tax Amount on Raw material = 4% of 40,000
= ₹1,600

Selling Price of Ready Stock = ₹78,000.

Sales tax on Ready stock = 7.5% of 78,000
= ₹5,850.

VAT Paid by the manufacturer

$$= \text{Sales tax on Readystock} - \text{Sales tax on Raw Material}$$

$$= ₹ 5,850 - ₹ 1,600$$

$$= ₹ 4,250.$$

Solution-04.

As wholesaler sales camera to shopkeeper at 20% discount of marked price.

The selling price of camera by wholesaler

$$= ₹ 1,600 - ₹ \frac{20}{100} \times 1,600$$

$$= ₹ 1,600 - ₹ 320$$

$$= ₹ 1,280$$

Cost Price of camera by shopkeeper = ₹ 1,280.

(i) Selling Price of camera by shopkeeper = ₹ 1,600.

VAT Paid by consumer = 6% of ₹ 1,600

$$= ₹ 96.$$

The price at which camera can be bought

$$= ₹ 1,600 + ₹ 96.$$

$$= ₹ 1,696.$$

(ii) Profit for the shopkeeper = - Cost Price + Selling Price

$$= S.P - C.P$$

$$= ₹ 1,600 - ₹ 1,280$$

$$= ₹ 320.$$

VAT Paid by the shopkeeper = 6% of ₹ 320

$$= ₹ 19.20 \text{ Ps.}$$

Solution-05.

(i) Printed Price of an Article ₹ 60,000.

AS whole saler allows a discount of 20% to Shopkeeper, cost price of the Article

$$\begin{aligned} &= ₹ 60,000 - 20\% \text{ of } ₹ 60,000 \\ &= ₹ 60,000 - \frac{20}{100} \times 60,000 \\ &= ₹ 60,000 - ₹ 12,000 \\ &= ₹ 48,000. \end{aligned}$$

VAT Paid by the shop keeper = 6% of ₹ 48,000

$$\begin{aligned} &= \frac{6}{100} \times 48,000 \\ &= 6 \times 480 \\ &= ₹ 2880. \end{aligned}$$

cost to the shopkeeper inclusive of tax

$$\begin{aligned} &= ₹ 48,000 + ₹ 2,880 \\ &= ₹ 50,880. \end{aligned}$$

(ii) Profit of an Article to Shopkeeper

$$\begin{aligned} &= ₹ 60,000 - ₹ 48,000 \\ &= ₹ 12,000. \end{aligned}$$

[∵ Shopkeeper sells an Article at Marked Price].

VAT Paid by the Shopkeeper to the government

$$\begin{aligned} &= (₹ 12,000) \times \frac{6}{100} \\ &= ₹ 720. \end{aligned}$$

(iii) Shopkeeper sells an Article at ₹ 60,000.

VAT Paid by consumer = 6% of ₹ 60,000

$$= \frac{6}{100} \times 60,000$$

$$= 6 \times 600$$

$$= ₹ 3,600$$

the cost to consumer inclusive of tax

$$= ₹ 60,000 + ₹ 3,600$$

$$= ₹ 63,600$$

Solution-06:-

Listed Price of an TV ₹ 24,000.

Shop keeper bought a TV at a discount of 30% of Listed Price

∴ cost price of a TV = 24,000 - 30% of Listed Price

$$= 24,000 - \frac{30}{100} \times 24,000$$

$$= 24,000 - 7,200$$

$$= 16,800$$

(i) Selling Price of a TV = 24,000 - 10% discount + 10% tax

$$= 24,000 - \frac{10}{100} \times 24,000$$

$$= 24,000 - 2,400$$

$$= ₹ 21,600$$

Selling Price of a TV including Tax = 21,600 + 10% of

21,600

$$= 21,600 + \frac{10}{100} \times 21,600$$

$$= 21,600 + 2,160$$

$$= ₹ 23,760$$

(ii) VAT Paid by the shopkeeper = 10% of Profit.

$$\begin{aligned}\text{Profit for shopkeeper by selling TV} &= \text{Selling Price} - \\ &\quad \text{cost price} \\ &= 21,600 - 16,800 \\ &= 4,800.\end{aligned}$$

$$\begin{aligned}\text{VAT to be paid by the shopkeeper} &= 10\% \text{ of } ₹ 4,800 \\ &= \frac{10}{100} \times 4,800 \\ &= ₹ 480.\end{aligned}$$

Solution-07.

Listed Price of an Article = ₹ 1,500.

Rate of VAT = 12%.

VAT paid by shopkeeper to the Government = ₹ 36.

$$\Rightarrow 12\% \text{ of Profit} = ₹ 36.$$

$$\Rightarrow \frac{12 \times \text{Profit}}{100} = ₹ 36$$

$$\Rightarrow \text{Profit} = \frac{3600}{12}$$

$$\Rightarrow \text{Profit} = 300.$$

Profit to Article by shopkeeper = Selling Price -
cost price

$$\begin{aligned}\text{cost price} &= \text{Selling price} - \text{profit} \\ &= ₹ 1,500 - ₹ 300 \\ &= ₹ 1,200.\end{aligned}$$

shopkeeper Purchased cost of an Article = cost Price +

$$\begin{aligned}&\quad 12\% \text{ VAT} \\ &= ₹ 1200 + \frac{12}{100} \times 1200 \\ &= ₹ 1200 + ₹ 144 = ₹ 1344\end{aligned}$$

Solution-08.

List Price of an Article = ₹800.

Let the amount of discount be ₹x.

As the shopkeeper sells the article at the List Price,
the profit of the shopkeeper = ₹x.

∴ The value added by the shopkeeper = ₹x.

As the shopkeeper pays a VAT of ₹6 and a
Rate of Sales tax = 7.5%.

$$\therefore 7.5\% \text{ of } x = ₹6.$$

$$\Rightarrow \frac{7.5}{100} \times x = ₹6$$

$$\Rightarrow x = \frac{600}{7.5}$$

$$\Rightarrow x = 80.$$

$$\therefore \text{Rate of discount} = \left(\frac{80}{800} \times 100 \right)\% = 10\%.$$

Solution-09.

Manufacturing company 'P' sells a desert cooler to
a dealer A for ₹8,100. inclusive of tax.

Rate of sales tax = 8%.

(i) the cost price of the cooler for dealer A =

Total Amount paid - Sales tax.

Let the amount paid 'x' then

$$\text{Sales tax} = ₹ \left(\frac{8}{100} \times x \right)$$

$$\text{Amount paid by dealer A} = x + \frac{8x}{100}$$

$$\Rightarrow x + \frac{2x}{25} \Rightarrow \frac{27x}{25}$$

∴ purchased cost by dealer A including

$$\text{Tax} = \frac{27x}{25}$$

$$\Rightarrow 8100 = \frac{27x}{25}$$

$$\Rightarrow 27x = \frac{25 \times 8100}{21}$$

$$\Rightarrow x = \frac{25 \times 8100}{27}$$

$$\Rightarrow x = 7,500$$

(ii) The amount of tax received by the Government = x
8% of VAT.

Dealer B sells to consumer = ₹ 8,500 + ₹ 600
= ₹ 9,100.

The amount of tax received by the
Government = 8% of ₹ 9,100
= $\frac{8}{100} \times 9,100$
= ₹ 728.

(iii) The dealer A sells it to a dealer B for ₹ 8,500 +
sale tax
= ₹ 8,500 + ₹ $\frac{8}{100} \times 8,500$
= ₹ 9,180.

Dealer B sells to consumer = ₹ 8,500 + ₹ 600
= ₹ 9,100.

Tax paid by consumer = 8% of ₹ 9,100
= $\frac{8}{100} \times 9,100$
= ₹ 728.

The amount which the consumer pays the cooler = ₹ 9,100 + ₹ 728
= ₹ 9,828.

Solution-10:-

Marked Price of an Article = ₹ 5,000.

Wholesaler's cost price of An Article = ₹ 5,000 -
 $\frac{25}{100} \times 5,000$
= ₹ 5,000 - ₹ 1,250
= ₹ 3,750.

VAT Paid by the wholesaler to Manufacturer = $\frac{8}{100} \times 3,750$
= 300

Retailer cost price of An Article = ₹ 5,000 - $\frac{15}{100} \times 5,000$
= ₹ 5,000 - ₹ 750
= ₹ 4,250.

VAT Paid by the Retailer to wholesaler = $\frac{8}{100} \times 4,250$
= ₹ 8 × 42.5
= ₹ 340.

Consumer cost Price = ₹ 5,000 as retailer sells to consumer at marked price.

VAT Paid by the consumer = $\frac{8}{100} \times 5,000$
= ₹ 400
= ₹ 400.

(i) VAT received from the wholesaler to Government

$$= ₹ 340 - ₹ 300$$

$$= ₹ 40.$$

(ii) VAT received by Government from retailer = ₹ 400 - ₹ 340

The amount which the consumer pays the cooler = ₹ 9,100 + ₹ 728
 = ₹ 9,828.

Solution-10:-

Marked Price of an Article = ₹ 5,000.

Wholesaler's cost price of An Article = ₹ 5,000 -
 $\text{₹ } \frac{25}{100} \times 5,000$
 = ₹ 5,000 - ₹ 1,250
 = ₹ 3,750.

VAT Paid by the wholesaler to manufacturer = $\frac{8}{100} \times 3,750$
 = 300

Retailer cost price of An Article = ₹ 5,000 - $\text{₹ } \frac{15}{100} \times 5,000$
 = ₹ 5,000 - ₹ 750
 = ₹ 4,250.

VAT paid by the Retailer to Wholesaler = $\text{₹ } \frac{8}{100} \times 4,250$
 = ₹ 8 × 42.5
 = ₹ 340.

Consumer cost Price = ₹ 5,000 as retailer sells to consumer at marked price.

VAT Paid by the consumer = $\text{₹ } \frac{8}{100} \times 5,000$
 = ₹ 400
 = ₹ 400.

(i) VAT received from the Wholesaler to Government
 = ₹ 340 - ₹ 300
 = ₹ 40.

(ii) VAT received by Government from retailer = ₹ 400 - ₹ 340
 = ₹ 60.

Solution-11:-

Listed Price of goods = ₹160.

Cost Price of goods to wholesaler =

$$\begin{aligned} & \text{Listed Price} - 25\% \text{ discount} \\ & = ₹160 - ₹\frac{25}{100} \times 160 \\ & = ₹160 - ₹40 \\ & = ₹120. \end{aligned}$$

Tax paid by wholesaler to Manufacturer = ₹ $\frac{10}{100} \times 120$

(∵ Sales tax on the goods - 10%)

$$= ₹12.$$

Cost price of the goods to retailer

$$\begin{aligned} & = \text{Listed price} - 20\% \text{ discount} \\ & = ₹160 - ₹\frac{20}{100} \times 160 \\ & = ₹160 - ₹32 \\ & = ₹128. \end{aligned}$$

Tax paid by retailer to wholesaler = ₹ $\frac{10}{100} \times ₹128$

$$= ₹12.80 \text{ Ps.}$$

Cost Price of the consumer = Listed price - 5% discount

$$\begin{aligned} & = ₹160 - ₹\frac{5}{100} \times 160 \\ & = ₹160 - ₹8 \\ & = ₹152. \end{aligned}$$

Tax Paid by consumer = ₹ $\frac{10}{100} \times ₹152$

$$= ₹15.20 \text{ Ps.}$$

(i) The VAT paid by the wholesaler =

$$₹12.80 \text{ PS} - ₹12.00$$

$$= ₹0.80 \text{ PS.}$$

(ii) The VAT paid by the retailer = VAT paid by consumer -

$$\text{VAT paid by retailer to Wholesaler}$$

$$= ₹15.20 - ₹12.80$$

$$= ₹2.40.$$

(iii) VAT received by the government

$$= ₹12 + ₹0.80 + ₹2.40$$

$$= ₹15.20.$$

Solution-12:-

Purchased Price of an Article = ₹5,400.

Cost Price of an Article = x ₹5,400 $\times \frac{₹20}{100} \times ₹5,400$

Let x be the cost Price then tax Paid = $\frac{20x}{100}$
 $= 0.2x.$

Purchased Price = Cost Price + Tax Paid

$$\Rightarrow x + 0.2x = ₹5,400$$

$$\Rightarrow 1.2x = ₹5,400$$

$$\Rightarrow x = \frac{₹5,400}{1.2}$$

$$\Rightarrow x = ₹4,500.$$

\therefore Cost Price of an Article = ₹4,500.

Let the marked price of an Article be 'y'
given that 10% rebate on the marked price

So marked price = cost price + 10% of 'y'

$$y = 4,500 + \frac{y}{10}$$

$$\Rightarrow y - \frac{y}{10} = 4,500$$

$$\Rightarrow \frac{10y - y}{10} = 4,500$$

$$\Rightarrow 9y = 45,000$$

$$\Rightarrow y = \frac{45,000}{9}$$

$$\Rightarrow y = 5,000$$

∴ Marked Price of an Article = ₹ 5,000.

Solution-13:-

Cost price of an Article to shopkeeper = ₹ 12,000.

$$\begin{aligned} \therefore \text{Marked Price of an Article} &= ₹ 12,000 + \frac{25}{100} \times 12,000 \\ &= ₹ 12,000 + ₹ (25 \times 120) \\ &= ₹ 12,000 + ₹ 3,000 \\ &= ₹ 15,000. \end{aligned}$$

The shopkeeper gives 10% discount to marked

$$\text{Price} = ₹ 15,000 - \frac{10}{100} \times ₹ 15,000$$

$$= ₹ 15,000 - ₹ 1,500$$

$$= ₹ 13,500$$

Further off-season discount 5% on Remaining

$$\begin{aligned} &= ₹ 13,500 - ₹ \frac{5}{100} \times 13,500 \\ &= ₹ 13,500 - ₹ (0.5 \times 13,500) \\ &= ₹ 13,500 - ₹ 6,750 \\ &= ₹ 12,825. \end{aligned}$$

(i) The amount of tax customer has to pay

$$= ₹ \frac{8}{100} \times ₹ 12,825$$

$$= ₹ 1,026.$$

(ii) The final price he has to pay for an Article

$$= \text{MR} + \text{Remaining price} + \text{Tax}$$

$$= ₹ 12,825 + ₹ 1,026.$$

$$= ₹ 13,851.$$

Solution-14:-

Purchased goods worth RS 9,60,000.

Total Paid tax on purchased goods ₹ 62,750.

$$\begin{aligned}\text{Goods Taxable } 6\% \text{ of } 4,00,000 &= ₹ \frac{6}{100} \times 4,00,000 \\ &= ₹ 6 \times 4000 \\ &= ₹ 2,4000\end{aligned}$$

$$\begin{aligned}\text{Goods Taxable } 12.5\% \text{ of } 4,80,000 &= ₹ 12.5\% \text{ of } 4,80,000 \\ &= ₹ \frac{12.50}{100} \times 4,80,000 \\ &= ₹ 12.5 \times 4,800 \\ &= ₹ 60,000\end{aligned}$$

Exempted goods worth ₹ 95,640.

∴ Tax Liability (under VAT) for this Period

$$= \text{Total input tax} + \text{Total output tax}$$

$$\text{Total input tax} = ₹ 62,750$$

$$\begin{aligned}\text{Total output tax} &= ₹ 24,000 + ₹ 60,000 \\ &= ₹ 84,000.\end{aligned}$$

$$\begin{aligned}\therefore \text{Tax Liability} &= ₹ 84,000 - ₹ 62,750 \\ &= \underline{₹ 21,250}\end{aligned}$$

Solution-15:-

calculation of input tax:

Tax Rate	purchases	Input taxes.
Floor Tiles (7.5%)	8,00,000	7.5% of 8,00,000 = ₹ 20,000.
Sanitary Fittings (10%)	7,50,000	10% of 7,50,000 = ₹ 75,000

Total Input Tax = ₹ 1,35,000.

Calculation of output tax.

Tax Rate	Purchases	Input taxes.
Floor Tiles (7.5%)	8,40,000	7.5% of 8,40,000 = ₹ 63,000
Sanitary Fittings (10%)	9,20,000	10% of 9,20,000 = ₹ 92,000.

Total output tax = ₹ 1,55,000.

Calculation of Adjustment output tax.

Tax Rate	Return.	Adjustment output tax
Floor Tiles - 7.5%	60,000	₹ 4,500

Total adjustment output tax → ₹ 4,500.

∴ Tax Liability (under VAT) of the firm during the said tax period

$$= \text{Total Input tax} - \text{Adjustment output tax} - \text{Total Input tax}$$

$$= ₹ 1,55,000 - ₹ 4,500 - ₹ 1,35,000$$

$$= ₹ 20,000 - ₹ 4,500$$

$$= ₹ 15,500.$$