

131 Operating ratio 82.59%

$$\begin{aligned} \text{Operating Profit Ratio} &= \frac{100}{100} - \text{Operating Ratio} \\ &= 17.41\% \end{aligned}$$

132 **Case 1**

$$\begin{aligned} \text{Operating Profit Ratio} &= \frac{\text{Operating Profit}}{300000} / \frac{\text{Revenue from Operations}}{2000000} \quad \begin{matrix} X & 100 \\ X & 100 \end{matrix} \\ &= 15.00\% \end{aligned}$$

Case 2

Step 1

$$\begin{aligned} \text{Operating Profit} &= \text{Revenue from operations} - \text{Operating Cost} \\ &= 600000 - 510000 \\ &= 90000 \end{aligned}$$

Step 2

$$\begin{aligned} \text{Operating Profit Ratio} &= \frac{\text{Operating Profit}}{90000} / \frac{\text{Revenue from Operations}}{600000} \quad \begin{matrix} X & 100 \\ X & 100 \end{matrix} \end{aligned}$$

$$= 15.00\%$$

Case 3

Step 1

Gross profit ratio	+	Cost of goods sold ratio	=	100
20	+	Cost of goods sold ratio	=	100

Cost of Goods Sold ratio	=	100	-	Gross profit ratio
		100	-	20

$$= 80\%$$

Step 2

Cost of Goods Sold	=	Revenue from operations	X	Cost of Goods Sold Ratio
		360000	X	80%

$$= 288000$$

Step 3

Operating Cost	=	Cost of Goods Sold	+	Operating Expenses
		288000	+	18000

$$= 306000$$

Step 4

Operating Profit	=	Revenue from operations	-	Operating Cost
		360000	-	306000

$$= 54000$$

Step 4

Operating Profit Ratio	=	Operating Profit	/	Revenue from Operations	X	100
		54000	/	360000	X	100
	=	15.00%				

Case 4**Step 1**

Operating Cost	=	Cost of Goods Sold	+	Operating Expenses
		360000	+	22500
	=	382500		

Step 4

Operating Profit	=	Revenue from operations	-	Operating Cost
		450000		382500
	=	67500		

Step 4

Operating Profit Ratio	=	Operating Profit	/	Revenue from Operations	X	100
		67500	/	450000	X	100
	=	15.00%				

Case 5**Step 1**

Gross Profit is 20% on sales

Let the sales be Rs 100	100
Gross Profit	20
Cost of Goods Sold	80

Now we want to find gross profit (numerator) from cost of goods sold (denominator)

$$\text{Gross Profit} = \frac{20}{80} \times 400000 = 100000$$

Step 2

$$\begin{aligned} \text{Operating Profit} &= \text{Gross Profit} - \text{Operating Expenses} \\ &= \frac{100000}{25000} \end{aligned}$$

Step 3

$$\begin{aligned} \text{Gross Profit} &= \text{Revenue from operations} \times \text{GP Ratio} \\ 100000 &= x \times \frac{20}{100} \end{aligned}$$

$$\begin{aligned} \text{Revenue from Operations} &= \frac{\text{Gross Profit}}{\text{GP Ratio}} \\ &= \frac{100000}{20} \\ &= 500000 \end{aligned}$$

Step 4

$$\begin{aligned} \text{Operating Profit Ratio} &= \frac{\text{Operating Profit}}{\text{Revenue from Operations}} \times 100 \\ &= \frac{75000}{500000} \times 100 \\ &= 15.00\% \end{aligned}$$

- 133 (a) No Change This will increase purchases as well as stock. So no impact on COGS
- (b) No Change This will increase purchases as well as stock. So no impact on COGS
- (c) No Change This transaction will increase the amount of operating profit and Revenue
But the % of Operating profit to Revenue will remain same
- (d) No Change This will decrease purchases as well as stock. So no impact on COGS

134 **Step 1**

Revenue from operations	=	Cash Sales	+	Credit Sales	-	Sales Return
		220000	+	300000	-	20000
	=	500000				

Step 2

Operating Profit	=	Gross profit	-	Operating Expenses
		100000	-	25000
	=	75000		

Step 3

Net profit	=	Operating Profit	-	Non Operating Expenses	+	Non Operating Income
		75000	-	5000	+	30000
	=	100000				

Step 4

$$\begin{aligned} \text{Net Profit Ratio} &= \frac{\text{Net Profit}}{100000} \times \frac{\text{Revenue from Operations}}{500000} \times 100 \\ &= 20\% \end{aligned}$$

$$\begin{aligned} 135 \quad \text{Net Profit Ratio} &= \frac{\text{Net Profit}}{120000} \times \frac{\text{Revenue from Operations}}{1200000} \times 100 \\ &= 10\% \end{aligned}$$

136 **Step 1**

$$\begin{aligned} \text{Gross profit} &= \text{Revenue from Operations} - \text{Cost of Revenue from Operations} \\ &= 820000 - 520000 \\ &= 300000 \end{aligned}$$

Step 2

$$\begin{aligned} \text{Operating Profit} &= \text{Gross profit} - \text{Operating Expenses} \\ &= 300000 - 209000 \\ &= 91000 \end{aligned}$$

Step 3

$$\begin{aligned} \text{Net profit} &= \text{Operating Profit} - \text{Non Operating expneses} + \text{Non Operating Income} \\ \text{Net profit} &= \text{Operating Profit} - \text{Interest on Debentures} + \text{Gain on sale of fixed asset} \\ &= 91000 - 40500 + 81000 \\ &= 131500 \end{aligned}$$

Step 4

Net Profit Ratio	=	Net Profit	/	Revenue from Operations	X	100
		131500	/	820000	X	100
	=	16.04%				

Note :

Interest on Debentures is a non operating expense

Gain on Sale of Fixed asset is a non operating income

137 **Step 1**

Operating Profit ratio	=	100	-	Operating Ratio
		100	-	90
	=	10%		

Step 2

Operating Profit	=	Revenue from operations	X	Operating Profit Ratio
		400000	X	10%
	=	40000		

Step 3

Net profit	=	Operating Profit	-	Non Operating Expenses	+	Non Operating Income
		40000	-	2000	+	22000
	=	60000				

Step 4

Net Profit Ratio	=	Net Profit	/	Revenue from Operations	X	100
		60000	/	400000	X	100
	=	15.00%				

138	Return on Investment	=	NP Before Interest and Tax	/	Capital Employed	X	100
			250000	/	1000000	X	100
		=	25%				

139 **Step 1**

Capital Employed	=	Net Fixed Assets	+	Net Working Capital
		2000000	+	1000000
	=	3000000		

Step 2

Return on Investment	=	NP Before Interest and Tax	/	Capital Employed	X	100
		600000	/	3000000	X	100
	=	20%				

140 **Step 1**

Capital Employed	=	15% Long Term Debt	+	Shareholders Funds
		800000	+	400000

$$= 1200000$$

Step 2

Return on Investment	=	NP Before Interest and Tax	/	Capital Employed	X	100
		400000	/	1200000	X	100
	=	33.33%				

