TS Grewal

Class 12

Accountancy Solutions

Vol.-1

CHAPTER-3 – Goodwill – Nature and Valuation

Solution 1
No. of Purchase Years = 3 years
Average Profit = 12,000 + 18,000 + 16,000 + 14,000/4 = ₹15,000
Goodwill = No. of Purchase Years x Average Profit
Therefore, Goodwill = 3 x 15,000
= ₹45,000

Solution 2
No. of Purchase Years = 4 years
Average Profit = 4,00,000 + 3,98,000 + 4,50,000 + 4,45,000 +
5,00,000/5 = ₹4,38,600
Goodwill = Average Profit x Number of Years of Purchase
Therefore, Goodwill = 4,38,600 x 4
= ₹17,54,400

Solution 3
Goodwill = Average Profit x Number of Years of Purchase
Average Profit = 8,00,000 + 15,00,000 + 18,00,000 - 4,45,000 +
13,00,000/5 = ₹10,00,000
Numbers of Years of Purchase = 3
Therefore, Goodwill = 10,00,000 x 3 = ₹30,00,000

Solution 4
Goodwill = Average Profit x Number of Years of Purchase
= 2,00,000 x 1.5 = ₹3,00,000
Working Notes:
Calculation of Profit for the last 3 Years:

Year	Profit

1st Year	1,00,000
2nd Year	(1,00,000 x 2) = 2,00,000
3rd Year	(2,00,000 x 1.5) = 3,00,000
Total Profit	**6,00,000**

Therefore, Average Profit = 6,00,000/3 = ₹2,00,000

Solution 5

Goodwill = Average Profit x Number of Years of Purchase
= 14,125 x 4 = ₹56,500

Working Notes:

Calculation of Profit for the last 5 Years:

Year	Profit
2014-15	14,000
2015-16	15,500
2016-17	10,000
2017-18	16,000
2018-19	15,000
Total Profit	**70,500**

Therefore, Average Profit for 5 Years: 70,500/5 = ₹14,100
Calculation of Profit for the last 4 Years:

Year	Profit
2015-16	15,500
2016-17	10,000
2017-18	16,000
2018-19	15,000
Total Profit	**56,500**

Therefore, Average Profit for 4 Years: 56,500/4 = ₹14,125

Since the profits for the last 4 years are greater than the profits for the last 5 years, ₹14,125 will be taken as the average profit for valuation of goodwill.

Solution 6

Average Profit for 3 Years = 2,88,000 + 1,81,800 + 1,87,200/3 = ₹2,19,000

Four Years' Average Profits = 2,88,000 + 1,81,800 + 1,87,200 + 2,53,200/4 = ₹2,27,550

Since the average profit for 4 year is greater than the average profit for 3 years, ₹2,27,550 will be taken as the total average profit for goodwill valuation.

Solution 7

Normal Profit = Total Profit – Abnormal Gain + Abnormal Loss

Year	Total Profit	(+) Abnormal Loss	(-) Abnormal Gain	Normal Profit (Total Profit – Abnormal Gain + Abnormal Loss)
16-17	1,00,000		12,500	87,500
17-18	1,25,000	25,000		1,50,000
18-19	1,12,500		12,500 (Unrecorded Expense)	1,00,000
Total				3,37,500

Average Profit = 87,500 + 1,50,000 + 1,00,000/3 = ₹1,12,500

Therefore, Goodwill = Average Profit x Number of Years of Purchase

= 1,12,500 x 2 = ₹2,25,000

Solution 8

Goodwill = Average Profit x Number of Years of Purchase

Calculation of Normal Profit:

Years	2015	2016	2017	2018	2019
Profit/Loss	1,50,000	3,50,000	5,00,000	7,10,000	(5,90,000)
Add: Adjustments: Less: Travelling Expenses Less: Depreciation Interest	– – –	– – –	– – –	– – (10,000)	1,00,000 (25,000) (10,000)
Normal Profit	**1,50,000**	**3,50,000**	**5,00,000**	**7,00,000**	**(5,25,000)**

Normal Average Profit = 1,50,000 + 3,50,000 + 5,00,000 + 7,00,000 – 5,25,000/5

= 11,75,000/5 = ₹2,35,000

Goodwill = Average Profit x Number of Years of Purchase

Therefore, Goodwill = 2,35,000 x 4 = ₹9,40,000

Solution 9

Calculation of Normal Profit:

Year	Total Profit	(+) Abnormal Loss	(-) Abnormal Gain	Normal Profit (Total Profit – Abnormal Gain + Abnormal Loss)
2017	1,10,000		30,000	80,000
2018	(80,000)	1,10,000	-	30,000
2019	30,000	40,000	-	70,000
Total				1,80,000

Normal Average Profit = 1,80,000/3 = ₹60,000

Number of Years of Purchase = 2 years

Therefore, Goodwill = Normal Average Profit x Number of Years of Purchase

= 60,000 x 2 = ₹1,20,000

Solution 10

Calculation of Normal Profit:

Year	Total Profit	(+) Abnormal Loss	(-) Abnormal Gain	Normal Profit (Total Profit – Abnormal Gain +

				Abnormal Loss)
2017	50,000	-	5,000	45,000
2018	(20,000)	30,000	-	10,000
2019	70,000	-	18,000 + 8,000 = 26,000	44,000
Total				99,000

Normal Average Profit = 99,000/3 = ₹33,000

Goodwill = Normal Average Profit x Number of Years of Purchase

Number of Years of Purchase = 2 years

Therefore, Goodwill = 33,000 x 2 = ₹66,000

Z's Share of Goodwill = Firm's Goodwill x Z's Profit Share

= 66,000 x 1/4 = ₹16,500

Solution 11

Calculation of Normal Profit:

Year	Profit/Loss	Adjustment	Normal Profit
31st March, 2016	80,000	20,000	1,00,000
31st March, 2017	1,45,000	(25,000)	1,20,000
31st March, 2018	1,60,000	(15,000)	1,45,000
31st March, 2019	2,00,000	–	2,00,000
Total			5,65,000

Average Profit= Total Normal profits/Number of Years = 5,65,000

= ₹1,41,250

Goodwill = Average Profit x Number of Years of Purchase

=1,41,250 x 2= ₹2,82,500

Solution 12

Calculation of Normal Profit/Loss:

Particulars	Year	31st March, 2015	31st March, 2016	31st March, 2017	31st March, 2018	31st March, 2019
Profit/Loss		(90,000)	1,60,000	1,50,000	65,000	1,77,000
Less: Gain on Selling Machinery			50,000			
Add: Abnormal Loss				20,000		
Add: Existing machinery Overhaul						
Debited to Repairs A/c					1,00,000	
Less: Depreciation at 20%					15,000	17,000
Normal Profit/Loss		**(90,000)**	**1,10,000**	**1,70,000**	**1,50,000**	**1,60,000**

Average Profits = Total Profits/Number of Years
= (90,000) + 1,10,000 + 1,70,000 + 1,50,000 + 1,60,000/5 = 5,00,000/5 = ₹1,00,000
Goodwill = Average Profits x Number of Years of Purchase
= ₹1,00,000 x 3 = ₹3,00,000

Solution 13

Calculation of Total Product Profit:

Year	Profit	Weight	Product (Profit x Weight)
2015	20,000	1	20,000
2016	24,000	2	48,000
2017	30,000	3	90,000
2018	25,000	4	1,00,000
2019	18,000	5	90,000
Total		**15**	**3,48,000**

Weighted Average Profit = Total Profit/Total Number of Weights
= 3,48,000/15 = ₹23,200
Therefore, Goodwill = Weighted Average Profit x Number of Years of Purchase
= 23,200 x 3 = ₹69,600

Solution 14

Calculation of Partner's Remuneration after Profit:

Year	Partner's Remuneration before Profit (I)	Partners' Remuneration (II)	Partner's Remuneration after Profit (I – II)
2016-17	2,00,000	90,000	1,10,000
2017-18	2,30,000	90,000	1,40,000
2018-19	2,50,000	90,000	1,60,000

Calculation of Weighted Average Profit:

Year	Profit	Weight	Product (Profit x Weight)
2016-17	1,10,000	1	1,10,000
2017-18	1,40,000	2	2,80,000
2018-19	1,60,000	3	4,80,000
	Total	**6**	**8,70,000**

Weighted Average Profit = Total Product Profit/Total Number of Weights
= 8,70,000/6 = ₹1,45,000
Therefore, Goodwill = Weighted Average Profit x Number of Years of Purchase
= 1,45,000 x 2 = ₹2,90,000

Solution 15
Calculation of Weighted Profits:

Year	Profits Before Salary	Profits After Salary	Weights	Weighted Profits
31st March, 2017	1,40,000	1,40,000- 90,000 = 50,000	1	50,000
31st March, 2018	1,01,000	1,01,000- 90,000 = 11,000	2	22,000
31st March, 2019	1,30,000	1,30,000- 90,000 = 40,000	3	1,20,000
Total			**6**	**1,92,000**

Weighted Average Profit = Total Product Profit/Total Number of Weights
= 1,92,000/6 = ₹32,000
Therefore, Goodwill = Weighted Average Profit x Number of Years of Purchase
= 32,000 x 4 = ₹1,28,000

Solution 16

Calculation of Normal Profit/Loss:

Particulars	Year	31st March, 2016	31st March, 2017	31st March, 2018	31st March, 2019
Profit		25,000	27,000	46,900	53,810
Add: Repair of Plant			10,000		
Less: Depreciation at 10%			(1,000)	(900)	(810)
Less: Overvaluation of Closing Stock			(1,000)	(2,000)	
Add: Overvaluation of Opening Stock				1,000	2,000
Less: Annual Charges		(5,000)	(5,000)	(5,000)	(5,000)
Normal Profit/Loss		**20,000**	**30,000**	**40,000**	**50,000**

Calculation of Weighted Profits:

Year	Normal Profits	Weights	Weighted Profits (Normal Profits x Weights)
31st March, 2016	20,000	1	20,000
31st March, 2017	30,000	2	60,000

31st March, 2018	40,000	3	1,20,000
31st March, 2019	50,000	4	2,00,000
Total		**10**	**4,00,000**

Weighted Average Profit = Total Product Profit/Total Number of Weights

= 4,00,000/10 = ₹40,000

Goodwill = Weighted Average Profit x Number of Years of Purchase

= 40,000 x 3 = ₹1,20,000

Solution 17

Calculation of Normal Profits:

Year	Adjustment	Normal Profits
2017	Total Profits - Profit on Sale of Assets 50,000 – 5,000	**45,000**
2018	Loss by Fire – Total Loss 35,000 – 20,000	**15,000**
2019	Total Profit – Insurance Claim Received – Dividend 70,000 – 18,000 – 8,000	**44,000**

Calculation of Weighted Profit:

Year	Normal Profits	Weights	Weighted Profits (Normal Profit x Weights
2017	45,000	1	45,000
2018	15,000	2	30,000
2019	44,000	3	1,32,000

Total	6	2,07,000

Weighted Average Profit = Total Weighted Profit/Total Number of Weigths

 = 2,07,000/6 = ₹34,500

Therefore, Goodwill = Weighted Average Profit x Number of Years of Purchase

= 34,500 x 2 = ₹69,000

Ramesh's Goodwill Share = 69,000 x ¼ = ₹17,250

Solution 18

Calculation of Normal Profit:

Year	Profit/Loss	Adjustments	Normal Profit
31st March, 2015	70,000	20,000	90,000
31st March, 2016	1,40,000	(30,000)	1,10,000
31st March, 2017	1,00,000	–	1,00,000
31st March, 2018	1,60,000	(10,000)	1,50,000
31st March, 2019	1,65,000	10,000	1,75,000

Calculation of Weighted Average Profit:

Year	Normal Profit	Weight	Product Profit
31st March, 2015	90,000	1	90,000
31st March, 2015	1,10,000	2	2,20,000
31st March, 2015	1,00,000	3	3,00,000
31st March, 2015	1,50,000	4	6,00,000
31st March, 2015	1,75,000	5	8,75,000
Total		15	20,85,000

Weighted Average Profit = Total Product Profit/Total Number of Weights

 = 20,85,000/15 = ₹1,39,000

Therefore, Goodwill = Weighted Average Profit × Number of Years of Purchase

=1,39,000 x 3 = ₹4,17,000

Solution 19

Calculation of Normal Profits:

Particulars	Year	31st March, 2015	31st March, 2016	31st March, 2017	31st March, 2018	31st March, 2019
Profit		1,25,000	1,40,000	1,20,000	55,000	2,57,000
Add: Repairs on New Machine					1,00,000	
Less: Depreciation at 20%					15,000	17,000
Add: Closing Stock Undervaluation					50,000	
Less: Opening Stock Undervaluation						50,000
Less: Partners' Remuneration		40,000	40,000	40,000	40,000	40,000
Normal Profit/Loss		**85,000**	**1,00,000**	**80,000**	**1,50,000**	**1,50,000**

Calculation of Weighted Profits:

Year	Normal Profits	Weights	Weighted Profits (Normal Profits x Weights)
31st March,	85,000	1	85,000

2015			
31st March, 2016	1,00,000	2	2,00,000
31st March, 2017	80,000	3	2,40,000
31st March, 2018	1,50,000	4	6,00,000
31st March, 2019	1,50,000	5	7,50,000
Total		**15**	**18,75,000**

Weighted Average Profit = Total Weighted Profits/Total Number of Weights
= 18,75,000/15 = ₹1,25,000
Therefore, Goodwill = Weighted Average Profits x Number of Years of Purchase
= 1,25,000 x 3 = ₹3,75,000

Solution 20

Particulars	2015-16	2016-17	2017-18	2018-19
Profits	1,01,000	1,24,000	1,00,000	1,40,000
Capitalised Repair			30,000	
Depreciation at 10%			(1,000)	(2,900)
Overvaluation of Closing Stock		(12,000)	12,000	
Management Cost	(24,000)	(24,000)	(24,000)	(24,000)

Sale Proceeds		(10,000)		
Incorrect Depreciation			900	810
Adjusted Profits	77,000	78,000	1,17,900	1,13,910
Weights	1	2	3	4
Product	**77,000**	**1,56,000**	**3,53,700**	**4,55,640**

Weighted Average Profit = Total Product Profits/Total Number of Weights

= (77,000 + 1,56,000 + 3,53,700 + 4,55,640) / (1 + 2 + 3 + 4)

= 1,04,234/10 = ₹1,04,234

Therefore, Goodwill = Weighted Average Profits x Number of Years of Purchase

= ₹1,04,234 x 3 = ₹3,12,702

Note: Sale wrongly credited in 2015-16 is deducted after adjusting ₹1,000 profit.

Solution 21

Average Normal Profits = Average Profits + Undervaluation of Stock = 80,000 + 8,000

=₹88,000

Normal Profits = Capital Employed x Rate of Income/100 = 8,00,000 x 8/100 = ₹64,000

Super Profits = Average Profits − Normal Profits = 88,000 – 64,000 = ₹24,000

Therefore, Goodwill = Super Profits x Number of Years of Purchase

= ₹24,000 x 7 = ₹1,68,000

Solution 22

Normal Profits = Capital x Normal Rate of Income/100 = 50,000 x 15/100 = ₹7,500

Actual Profit = ₹16,000

Super Profit = Actual Profit – Normal Profit = 16,000 – 7,500 = ₹8,500

Total Years of Purchase = 4

Therefore, Goodwill = Super Profits x Number of Years of Purchase

= 8,500 x 4 = ₹34,000

Solution 23

Super Profit = Average Profit – Normal Profit

Average Profit = Total Weighted Profit/Total Number of Weights

= 30,000 + 36,000 + 42,000/3

= 1,08,000/3 = ₹36,000

Normal Profits = Capital x Normal Rate of Income/100 = 1,00,000 x 15/100 = ₹15,000

Super Profit = Average Profit – Normal Profit = ₹36,000 – ₹15,000 = ₹21,000

Total Years of Purchase = 2

Goodwill = Super Profits x Number of Years of Purchase

Therefore, Goodwill = 21,000 x 2 = ₹42,000

Solution 24

Actual Profits = ₹5,000

Normal Profits = Capital x Normal Rate of Income/100 = 25,000 x 15/100 = ₹3,750

Super Profits = Actual Profits - Normal Profits = 5,000 – 3,750 = ₹1,250

Number of Years of Purchase = 3 years

Goodwill = Super Profits x Number of Years of Purchase

= ₹1,250 x 3 = ₹3,750

Solution 25

Goodwill = Super Profits x Number of years of Purchase

Normal Profits = Capital x Normal Rate of Income/100 = 2,00,000 x 10/100 = ₹20,000

Super Profits = Actual Profits - Normal Profits = 30,000 – 20,000 = ₹10,000

Years of Purchase = 2 years

Therefore, Goodwill = 10,000 x 2 = ₹20,000

Solution 26

Goodwill = Super Profits x Number of Years of Purchase

Normal Profits = Capital x Normal Rate of Income/100 = 80,000 x 15/100 = ₹12,000

Average Profit = Total Weighted Profit/Total Number of Weights

= 17,000 + 20,000 + 23,000/3 = 60,000/3 = ₹20,000

Years of Purchase = 2 years

Therefore, Goodwill = 8,000 x 2 = ₹16,000

Solution 27

Goodwill = Super Profits × No. of years of Purchase

Normal Profits= Capital x Normal Rate of Income/100 = 4,00,000 x 15/100 = ₹60,000

Year	Profit before	Partners'	Actual Profit after

	Partners' Remuneration (I)	Remuneration (II)	Remuneration (I – II)
2017	1,70,000	1,00,000	70,000
2018	2,00,000	1,00,000	1,00,000
2019	2,30,000	1,00,000	1,30,000

Average Profit = Total Weighted Profit/Total Number of Weights
= 70,000 + 1,00,000 + 1,30,000/3 = 3,00,000/3 = ₹1,00,000
Super Profits = Actual Profits − Normal Profits = 1,00,000 – 60,000
= ₹40,000
Number of Years of Purchase = 2 years
Therefore, Goodwill = 40,000 x 2 = ₹80,000

Solution 28
Goodwill = Super Profits x Number of years of Purchase
Normal Profits = Capital Employed Normal Rate of Income/100
Capital Employed = Total Assets – Non − Trade Investments −
Outside Liabilities
= 23,00,000−1,00,000−5,60,000 = ₹16,40,000
Normal Profits = 16,40,000 x 10/100 = ₹1,64,000
Average Profits= ₹4,00,000
Super Profits = Average Profits - Normal Profits = 4,00,000
−1,64,000 = ₹2,36,000
Number of Years of Purchase = 3 years
Therefore, Goodwill = 2,36,000 x 3 = ₹7,08,000

Solution 29
Goodwill = Super Profits x Number of Years of Purchase
Normal Profits = Capital x Normal Rate of Income/100
Capital Employed = Total Assets – Non−Trade Investments −
Outside Liabilities

= 19,50,000 − 50,000 − 4,00,000 = ₹15,00,000
Normal Profits = 15,00,000 x 15/100 = ₹2,25,000
Average Profits= ₹4,00,000
Super Profits = Average Profits – Normal Profits = 4,00,000 − 2,25,000 = ₹1,75,000
Number of Years of Purchase = 4 years
Therefore, Goodwill = 1,75,000 x 4= ₹7,00,000

Solution 30
Goodwill = Super Profits x Number of Years of Purchase
Normal Profits = Capital x Normal Rate of Income/100
Capital Employed = Total Assets − Outside Liabilities
= 22,00,000 − 5,60,000 − 4,00,000 = ₹16,40,000
Normal Profits = 16,40,000 x 10/100 = ₹1,64,000
Average Profits = ₹8,00,000
Super Profits = Average Profits - Normal Profits= 8,00,000 − 1,64,000= ₹6,36,000
Number of Years of Purchase = 2.5
Therefore, Goodwill = 6,36,000 x 2.5 = ₹15,90,000