Chapter 2 Goodwill: Nature and Valuation

Question 1.
Goodwill is to be valued at three years purchase of four years average profit. Profits for last four years ending on 31st March of the firm were:
2015 ₹ 12,000; 2016 ₹ 18,000; 2017 ₹ 16,000; 2018 ₹ 14,000.
Calculate amount of Goodwill.
Solution:

$$\text{Goodwill} = \text{Average profit} \times \text{number of years purchase}$$

$$\text{Average Profit} = \frac{\text{Total Profit for past given years}}{\text{Number}}$$

$$= \frac{12,000 + 18,000 + 16,000 + 14,000}{4} = \frac{60,000}{4}$$

$$= ₹15,000$$

$$\text{Number of Years purchase} = 3$$

$$\therefore \text{Goodwill} = 15,000 \times 3 = ₹45,000$$

Question 2.
The profit for the five years ending on 31st March, are as follows:
Year 2014 ₹ 4,00,000; Year 2015 ₹ 3,98,000; Year 2016 ₹ 4,50,000; Year 2017 ₹ 4,45,000; Year 2018 ₹ 5,00,000.
Calculate goodwill of the firm on the basis of 4 years purchase of 5 years average profit.
Solution:

$$\text{Goodwill} = \text{Average Profits} \times \text{Number of Years' Purchase}$$

$$\text{Average Profits} = \frac{\text{Total Profits}}{\text{Number of Years}}$$

$$= \frac{4,00,000 + 3,98,000 + 4,50,000 + 4,45,000 + 5,00,000}{5}$$

$$= \frac{21,93,000}{5} = ₹4,38,600$$

$$\text{Goodwill} = 4,38,600 \times 4 = ₹17,54,400$$

Question 3.
Calculate value of goodwill on the basis of three years purchase of average profit of the preceding five years which were as follows:

Year	2017–18	2016–17	2015–16	2014–15	2013–14
Profits (₹)	8,00,000	15,00,000	18,00,000	4,00,000 (Loss)	13,00,000

Solution:

$$\text{Goodwill} = \text{Average profit} \times \text{Number of years purchase}$$

$$\text{Average profit} = \frac{8,00,000 + 15,00,000 + 18,00,000 - 4,00,000 + 13,00,000}{5}$$

$$= \frac{50,00,000}{5} = ₹10,00,000$$

$$\text{Number of years purchase} = 3$$

$$\therefore \text{Goodwill} = 10,00,000 \times 3 = ₹30,00,000$$

Question 4.

Calculate the value of firm's goodwill on the basis of one and half years purchase of the average profit of the last three years. The profit for first year was ₹ 1,00,000, profit for the second year was twice the profit of the first year and for the third year profit was one and half times of the profit of the second year.

Solution:

$$\text{Goodwill} = \text{Average Profit} \times \text{Number of years purchase}$$

$$\text{Goodwill} = 2,00,000 \times 1.5 = \text{Rs.}3,00,000$$

Working Notes:

1.

Calculation of Profits (last 3 years)

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

2. Calculation Of Average profit

$$\text{Average Profit} = \frac{\text{Total Profits for Previous given years}}{\text{No. of years}}$$

$$= \frac{6,00,000}{3}$$

$$= ₹\ 2,00,000$$

Question 5.

A and B are partners sharing profits in the ratio of 3 : 2. They decided to admit C as a partner from 1st April, 2018 on the following terms:

(i) C will be given 2/5th share of the profit.

(ii) Goodwill of the firm be valued at two years purchase of three years normal average profit of the

firm.
profits of the previous three years ended 31st March, were:
2018 – Profit ₹ 30,000 (after debiting loss of stock by fire ₹ 40,000).
2017 – Loss ₹ 80,000 (includes voluntary retirement compensation paid ₹ 1,10,000).
2016 – Profit ₹ 1,10,000 (including a gain (profir) of ₹ 30,000 on the sale of fixed assets).
you are required to value the goodwell.

Solution:

Goodwill = Normal Average Profit × Number of years purchase

Normal Average Profit = 60, 000

Number of years purchase is 2

∴ Goodwill = 60, 000 x 2 = ₹1, 20, 000

Working Note:

Year	Actual Profit	+	Abnormal Loss Non-Recurring	-	Abnormal Gain Non-Recurring	=	Normal Profit
2018	30,000	+	40,000	-	Nil	=	70,000
2017	(80,000)	+	1,10,00	-	Nil	=	30,000
2016	1,10,000	+	Nil	-	30,000	=	80,000
Normal Profits for last 3 years						=	1,80,000

$$\text{Normal Average Profit} = \frac{\text{Normal Profit for last 3 years}}{3}$$

$$= \frac{1,80,000}{3}$$

= ₹60, 000

Question 6.

X and Y are partners sharing profits and losses in the ratio of 3 : 2. They admit Z into partnership for 1/4th share in goodwill. Z brings in his share of goodwill in cash. Goodwill for this purpose is to be calculated at two years purchase of the average normal profit of past three years. Profits of the last three years ended 31st March, were:
2016 – Profit ₹ 50,000 (including profit on sale of assets ₹5,000).
2017 – Loss ₹ 20,000 (includes loss by fire ₹ 30,000).
2018 – Profit ₹ 70,000 (including insurance claim received ₹ 18,000 and interest on investments and Dividend received ₹ 8,000).
Calculate value of goodwill. Also, calculate goodwill brought in by Z.

Solution:

Goodwill = Normal Average Profit × Number of years' of purchase

$\therefore$ Goodwill $= 33,000 \times 2 = ₹66,000$

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

$$= 66,000 \times \frac{1}{4} = ₹16,500$$

Working Notes:

Year	Actual Profit	+	Abnormal Loss Non-Recurring	-	Abnormal Gain Non-Recurring	=	Normal Profit
2016	50,000	+	Nil	-	5,000	=	45,000
2017	(20,000)	+	30,000	-	Nil	=	10,000
2018	70,000	+	Nil	-	18,000 + 8,000	=	44,000
							99,000
Normal Profits for last 3 years							

$$\text{Normal Average Profit} = \frac{\text{Normal Profit for last 3 years}}{3}$$

$$= \frac{99,000}{3} = ₹33,000$$

Question 7.

A and B are partners in a firm sharing profits and losses in the ratio of 2 : 1. They decide to take C into partnership for 1/4th share on 1st April, 2018. For this purpose, goodwill is to be valued at four times the average annual profit of the previous four or five years whichever is higher. The agreed profits for goodwill purpose of the past five years are:

Year	2013–14	2014–15	2015–16	2016–17	2017–18
Profit (₹)	14,000	15,500	10,000	16,000	15,000

Solution:

Computation of Goodwill:

Goodwill = Average Profit × Number of years' purchase

$14,125 \times 4 =$ ₹56,500

Working Notes:

Calculation of Average Profit (Five Years)

Year	Profit
2013-14	14,000
2014-15	15,500
2015-16	10,000
2016-17	16,000
2017-18	15,000
Total Profit	**70,500**

$$\text{Average Profit of Five Years} = \frac{70,500}{5} = ₹14,100$$

Calculation of Average Profit (Four Years)

Year	Profit
2014-15	15,500
2015-16	10,000
2016-17	16,000
2017-18	15,000
Total Profit	**56,500**

$$\text{Average Profit of Four Years} = \frac{56,500}{4} = ₹\ 14,125$$

Average Profits (4 Years) > Average Profits (5 Years)

Accordingly, for Goodwill Valuation, Average profits = 14,125

Question 8.

Sumit purchased Amit's business on 1st April, 2018. Goodwill was decided to be valued at two years' purchase of average normal profit of last four years. The profits for the past four years were:

Year Ended	31st March, 2015	31st March, 2016	31st March, 2017	31st March, 2018
Profit (₹)	80,000	1,45,,000	1,60,000	2,00,000

Books of Account revealed that:

(i) Abnormal loss of ₹ 20,000 was debited to Profit and Loss Account for the year ended 31st March, 2015.

(ii) A fixed asset was sold in the year ended 31st March, 2016 and gain (profit) of ₹ 25,000 was credited to Profit and Loss Account.
(iii) In the year ended 31st March, 2017 assets of the firm were not insured due to oversight. Insurance premium not paid was ₹ 15,000.
Calculate the value of goodwill.

Solution:

Goodwill = Average Profit × Number of years Purchase

Goodwill = 1,41,250 ×2 = Rs.2,82,500

Working Notes:

1.

Calculation Of Normal Profits (31st March Closed)

Years	2015	2016	2017	2018
Profit /Loss	80,000	1,45,000	1,60,000	2,00,000
Adjustment	20,000	(25,000)	(15,000)	
Normal Profit	**1,00,000**	**1,20,000**	**1,45,000**	**2,00,000**

Total of Normal Profit = 1,00,000 + 1,20,000 + 1,45,000 + 2,00,000
= Rs.5,65,000

2.

$$\text{Average Profit} = \frac{\text{Total Profits for Previous given years}}{\text{No. of years}}$$

$$= \frac{5,65,000}{4}$$

$$= ₹1,41,250$$

Question 9.

X and Y are partners in a firm. They admit Z into partnership for equal share. It was agreed that goodwill will be valued at three years purchase of average profit of last five years. Profits for the last five years were:

Year Ended	31st March, 2014	31st March, 2015	31st March, 2016	31st March, 2017	31st March, 2018
Profit (₹)	90,000 (Loss)	1,60,000	1,50,000	65,000	1,77,000

Books of Account of the firm revealed that:
(i) The firm had gain (profit) of ₹ 50,000 from sale of machinery sold in the year ended 31st March, 2015. The gain (profit) was credited in Profit and Loss Account.
(ii) There was an abnormal loss of ₹ 20,000 incurred in the year ended 31st March, 2016 because of a machine becoming obsolete in accident.
(iii) Overhauling cost of second hand machinery purchased on 1st July, 2016 amounting to ₹

1,00,000 was debited to Repairs Account. Depreciation is charged @ 20% p.a. on Written Down Value Method.
Calculate the value of goodwill.

Solution:

Goodwill = Average Profit × Number of years Purchase

Goodwill = Rs.1,00,000 ×3 = Rs.3,00,000

Working Notes:

1.

Calculation Of Normal Profits (31st March Closed)

Years	2014	2015	2016	2017	2018
Profit /Loss	(90,000)	1,60,000	1,50,000	65,000	1,77,000
Adjustment	--	(50,000)	20,000	85,000@	(17,000)
Normal Profit	**(90,000)**	**1,10,000**	**1,70,000**	**1,50,000**	**1,60,000**

Total of Normal Profit = (-90,000) + 1,10,000 + 1,70,000 + 1,50,000 + 1,60,000

= Rs.5,00,000

Adjustment Amount

Overhauling cost of second hand machinery (Wrongly accounted as expense instead of capital expenditure)	Rs.1,00,000
Less: Depreciation to be debited from Profit and Loss Account $\left(1,00,000 \times \frac{20}{100} \times \frac{9}{12}\right)$	Rs.15,000
Adjustment Normal profit added	Rs.85,000

2.

$$\text{Average Profit} = \frac{\text{Total Profits for Previous given years}}{\text{No. of years}}$$

$$= \frac{5,00,000}{5}$$

$$= ₹1,00,000$$

Question 10.

Profits of a firm for the year ended 31st March for the last five years were:

Year ended	31st March, 2014	31st March, 2015	31st March, 2016	31st March, 2017	31st March, 2018
Profit (₹)	20,000	24,000	30,000	25,000	18,000

Calculate value of goodwill on the basis of three years purchase of Weighted Average Profit after assigning weights 1, 2, 3, 4 and 5 respectively to the profits for years ended 31st March, 2014, 2015, 2016, 2017 and 2018.

Solution:

$$\text{Goodwill} = \text{Weighte Average Profit} \times \text{Number of years' purchase}$$
$$= 23,200 \times 3 = ₹69,600$$

Working Notes:

Year	Profit	×	Weight	=	Product
2014	20,000	×	1	=	20,000
2015	24,000	×	2	=	48,000
2016	30,000	×	3	=	90,000
2017	25,000	×	4	=	1,00,000
2018	18,000	×	5	=	90,000
Total			**15**		**3,48,000**

$$\text{Weighted Average Profit} = \frac{\text{Total Product of Profits}}{\text{Total of Weights}}$$
$$= \frac{3,48,000}{15} = ₹23,200$$

Question 11.

A and B are partners sharing profits and losses in the ratio of 5 : 3. On 1st April, 2018, C is admitted to the partnership for 1/4th share of profits. For this purpose, goodwill is to be valued at two years purchase of last three years profits (after allowing partners remuneration). Profits to be weighted 1 : 2 : 3, the greatest weight being given to last year. Net profit before partners remuneration were: 2015-16: ₹ 2,00,000; 2016-17: ₹ 2,30,000; 2017 -2018: ₹ 2,50,000. The remuneration of the partners is estimated to be ₹ 90,000 p.a. Calculate amount of goodwill.

Solution:

$$\text{Weighted Average Profit} = \frac{\text{Total Product of Profits}}{\text{Total of Weights}}$$

$$\text{or, Weighted Average Profit} = \frac{8,70,000}{6} = ₹1,45,000$$

Goodwill = Weighte Average Profit × Number of years' purchase

Goodwill = 1, 45, 000 x 2 =₹2, 90, 000

Working Notes:

Year	Profit before Partners Remuneration	-	Partners Remuneration	=	Profit after Partners Remuneration
2016	2,00,000	-	90,000	=	1,10,000
2017	2,30,000	-	90,000	=	1,40,000
2018	2,50,000	-	90,000	=	1,60,000

Year	Profit	×	Weight	=	Product
2016	1,10,000	×	1	=	1,10,000
2017	1,40,000	×	2	=	2,80,000
2018	1,60,000	×	3	=	4,80,000
Total			6		8,70,000

Question 12.

Manbir and Nimrat are partners and they admit Anahat into partnership. It was agreed to value goodwill at three tears purchase on Weighted Average Profit Method taking profits of last five years. Weights assigned to each year as 1, 2, 3, 4 and 5 respectively to profit for the year ended 31st March, 2014 to 2108. The profit for these years were: ₹ 70,000, ₹ 1,40,000, ₹ 1,00,000, ₹ 1,60,000 and ₹ 1,65,000 respectively.

Scrutiny of books of account revealed following information:

(i) There was an abnormal loss of ₹ 20,000 in the year ended 31st March, 2014.

(ii) There was an abnormal gain (profit) of ₹ 30,000 in the year ended 31st March, 2015.

(iii) Closing Stock as on 31st March, 2017 was overvalued by ₹ 10,000.

Calculate the value of goodwill.

Solution:

Goodwill = Weighted Average Profit × Number of years' Purchase

Goodwill = Rs.1,39,000 × 3 = Rs.4,17,000

Working Notes:

1.

Calculation Of Normal Profits (31st March Closed)

Years	2014	2015	2016	2017	2018
Profit /Loss	70,000	1,40,000	1,00,000	1,60,000	1,65,000
Adjustment	20,000	(30,000)	----	(10,000)	10,000
Normal Profit	**90,000**	**1,10,000**	**1,00,000**	**1,50,000**	**1,75,000**

2.

Calculation Of Weighted Average Profit (31st March Closed)

Years	2014	2015	2016	2017	2018
i. Normal Profit	90,000	1,10,000	1,00,000	1,50,000	1,75,000
ii. Adjustment (i ×ii)	1	2	3	4	5
Product	**90,000**	**2,20,000**	**3,00,000**	**6,00,000**	**8,75,000**

Total of weight = 1 + 2 + 3 + 4 + 5 = **15**

Total of Product Profit = 90,000 + 2,20,000 + 3,00,000 + 6,00,000 + 8,75,000 = Rs.20,85,000

$$\text{Weight Average Profit} = \frac{\text{Total of Product profit}}{\text{Total of Weight}}$$

$$= \frac{20,85,000}{15}$$

$$= ₹1,39,000$$

Question 13.

Calculate the goodwill of a firm on the basis of three years purchase of the weighted average profit of the last four years. The appropriate weights to be used and profits are:

Year	2014-15	2015-16	2016-17	2017-18
Profit (₹)	1,01,000	1,24,000	1,00,000	1,40,000
Weight	1	2	3	4

On a scrutiny of the accounts, the following matters are revealed:

(i) On 1st December, 2016, a major repair was made in respect of the plant incurring ₹ 30,000 which was charged to revenue. The said sum is agreed to be capitalised for goodwill calculation subject to adjustment of depreciation of 10% p.a. on reducing balance method.

(ii) The closing stock for the year 2015-16 was overvalued by ₹ 12,000.

(iii) To cover management cost, an annual charge of ₹ 24,000 should be made for the purpose of goodwill valuation.

(iv) In 2015-16, a machine having a book value of ₹ 10,000 was sold for ₹ 11,000 but the proceeds were wrongly credited to Profit and Loss Account. No effect has been given to rectify the same. Depreciation is charged on machine @ 10% p.a. on reducing balance method.

Solution:

Particulars	2014-15	2015-16	2016-17	2017-18
Profits	1,01,000	1,24,000	1,00,000	1,40,000
Repair Capitalised			+30,000	
Depreciation			(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)		
Adjusted Profits	77,000	78,000	1,17,000	1,13,100
Weights	1	2	3	4
Product	77,000	1,56,0000	3,51,000	4,52,400

Working Notes:

Goodwill = Weighted Average Profits x Number of Years' Purchase

$$\text{Weighted Average Profits} = \frac{\text{Total of Product}}{\text{Total of Weights}}$$

$$= \frac{77,000 + 1,56,000 + 3,51,000 + 4,52,400}{10} = 1,03,640$$

Goodwill = 1,03,640 x 3 = ₹3,10,9,20

Note 1: Depreciation on Rs.30,000 machinery is charged for only 4 months in the year 2016-17.

Note 2: Sale proceeds wrongly credited in 2015-16 have been deducted after adjusting for profit of Rs.1,000. No depreciation is charged, since date of sale is not given (assumed that the machinery is sold at the end of the year).

Question 14.

Gupta and Bose had a firm in which they had invested ₹ 50,000. On an average, the profits were ₹ 16,000. The normal rate of return in the industry is 15%. Goodwill is to be valued at four years purchase of profits in excess of profits @ 15% on the money invested. Value th goodwill.

Solution:

Goodwill = Super Profit x Number of Years Purchase

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Normal Rate Return}}{100}$$

$$= 50,000 \times \frac{15}{100} = ₹7,500$$

Actual Profit = ₹16,000

Super Profit = Actual Profit – Normal Profit

= 16,000 – 7,500 = ₹8,500

Number of years purchase = 4

Super Profit = 8,500

∴ Goodwill = Super Profit x Number of Years Purchase

∴ Goodwill = 8,500 x 4

= ₹34,000

Question 15.

The total capital of the firm of Sakshi, Mehak and Megha is ₹ 1,00,000 and the market rate of interest is 15%. The net profits for the last 3 years were ₹ 30,000; ₹ 36,000 and ₹ 42,000. Goodwill is to be valued at 2 years purchase of the last 3 years super profits. Calculate the goodwill of the firm.

Solution:

$$\text{Goodwill} = \text{Super Profit} \times \text{Number of Years' Purchase}$$

$$\text{Super Profit} = \text{Average Profit} - \text{Normal Profit}$$

$$\text{Average Profits} = \frac{\text{Total Profits}}{\text{Number of Years}}$$

$$= \frac{30,000 + 36,000 + 42,000}{3} = \frac{1,08,000}{3} = ₹36,000$$

$$\text{Normal Profit} = \text{Capital Employed} \times \text{Normal Rate of Return}$$

$$= 1,00,000 \times \frac{15}{100} = 15,000$$

$$\text{Super Profit} = 36,000 - 15,000 = 21,000$$

$$\text{Goodwill} = 21,000 \times 2 = ₹42,000$$

Question 16.

The average net profit expected in future by XYZ firm is ₹ 36,000 per year. Average capital employed in the business by the firm is ₹ 2,00,000. The normal rate of return from capital invested in this class of business in 10%. Remuneration of the partners is estimated to be ₹ 6,000 p.a. Find out the value of goodwill on the basis of two years purchase of super profit.

Solution:

$$\text{Goodwill} = \text{Super Profit} \times \text{Number of Years Purchase}$$

$$\text{Normal Profit} = \text{Expected Capital Employed} \times \frac{\text{Normal Rate Return}}{100}$$

$$= 2,00,000 \times \frac{10}{100} = ₹20,000$$

$$\text{Actual Expected Profit} = 36,000 - 6,000 = ₹30,000$$

$$\text{Super Profit} = \text{Actual Expected Profit} - \text{Normal Expected Profit}$$

$$= 30,000 - 20,000$$

$$= ₹10,000$$

$$\text{Number of years purchase} = 2$$

$$\text{Super Profit} = ₹10,000$$

$$\therefore \text{Goodwill} = \text{Super Profit} \times \text{Number of Years Purchase}$$

$$\therefore \text{Goodwill} = 10,000 \times 2$$

$$= ₹20,000$$

Question 17.

A partnership firm earned net profits during the last three years ended 31st March, as follows: 2016 – ₹ 17,000; 2017 – ₹ 20,000; 2018 – ₹ 23,000.

The capital investment in the firm throughout the above-mentioned period has been ₹ 80,000. Having regard to the risk involved, 15% is considered to be a fair return on the capital. Calculate value of goodwill on the basis of two years purchase of average super profit earned during the above-mentioned three years.

Solution:

$$\text{Goodwill} = \text{Super Profit} \times \text{Number of Years Purchase}$$

$$\text{Average Actual Profit} = \frac{17,000 + 20,000 + 23,000}{3} = \frac{60,000}{3}$$

$$= ₹20,000$$

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Fair Rate Return}}{100}$$

$$= 80,000 \times \frac{15}{100}$$

$$= ₹12,000$$

$$\text{Super Profit} = \text{Average Actual Profit} - \text{Normal Profit}$$

$$= 20,000 - 12,000$$

$$= ₹8,000$$

$$\text{Number of years purchase} = 2$$

$$\text{Super Profit} = ₹8,000$$

$$\therefore \text{Goodwill} = \text{Super Profit} \times \text{Number of Years Purchase}$$

$$\therefore \text{Goodwill} = 8,000 \times 2 = ₹16,000$$

Question 18.

A partnership firm earned net profits during the past three years as follows:

Year ended	31st March, 2018	31st March, 2017	31st March, 2016
Net Profit (₹)	2,30,000	2,00,000	1,70,000

Capital investment in the firm throughout the above-mentioned period has been ₹ 4,00,000. Having regard to the risk involved, 15% in considered to be a fair return on the capital. The remuneration of the partners during this period is estimated to be ₹ 1,00,000 p.a.

Calculate value of goodwill on the basis of two years purchase of average super profit earned during the above-mentioned three years.

Solution:

$$\text{Goodwill} = \text{Super Profit} \times \text{Number of Years Purchase}$$

$$\text{Normal Profit} = \text{Capital Investment} \times \frac{\text{Normal Rate Return}}{100}$$

$$= 4,00,000 \times \frac{15}{100} = ₹60,000$$

Year	Profit before Partners' Remuneration	–	Partner's Remuneration	=	Profit after Partner's Remuneration
2016	1,70,000	-	1,00,000	=	70,000
2017	2,00,000	-	1,00,000	=	1,00,000
2018	2,30,000	-	1,00,000	=	1,30,000

Average Actual Profit (Remuneration)

$$= \frac{70,000 + 1,00,000 + 1,30,000}{3} = \frac{3,00,000}{3}$$

$= ₹1,00,000$

Super Profit = Average Actual Profit (Remuneration) – Normal Profit

$= 1,00,000 - 60,000$

$= ₹40,000$

Number of years purchase = 2

Super Profit = ₹40,000

∴ Goodwill = Super Profit × Number of Years Purchase

∴ Goodwill = $40,000 \times 2$ = ₹80,000

Question 19.

A business earned an average profit of ₹ 8,00,000 during the last few years. The normal rate of profit in the similar type of business is 10%. The total value of assets and liabilities of the business were ₹ 22,00,000 and ₹ 5,60,000 respectively. Calculate the value of goodwill of the firm by super profit method if it is valued at $2\frac{1}{2}$ years purchase of super profits.

Solution:

$$\text{Average Profit} = ₹8,00,000$$

$$\text{Capital Employed} = \text{Total Assets} - \text{outside Liabilities}$$

$$= 22,00,000 - 5,60,000$$

$$= ₹16,40,000$$

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Normal Rate}}{100}$$

$$= 16,40,000 \times \frac{10}{100} = ₹1,64,000$$

$$\text{Super Profit} = \text{Average Profit} - \text{Normal Profit}$$

$$= 8,00,000 - 1,64,000$$

$$= ₹6,36,000$$

$$\text{Goodwill} = \text{Super Profit} \times \text{No. of Years' Purchase}$$

$$= 6,36,000 \times 2.5$$

$$= ₹15,90,000$$

Question 20.

Capital of the firm of Sharma and Verma is ₹ 2,00,000 and the market rate of interest is 15%. Annual salary to partners is ₹ 12,000 each. The profits for the last three years were ₹ 60,000; ₹ 72,000 and ₹ 84,000. Goodwill is to be valued at 2 years purchase of last 3 years average super profit. Calculate goodwill of the firm.

Solution:

Goodwill = Super Profit x Number of Years Purchase

$$\text{Normal Profit} = \text{Capital Investment} \times \frac{\text{Normal Rate Return}}{100}$$

$$= 2,00,000 \times \frac{15}{100} = ₹30,000$$

Year	Profit before Partners' Salary	-	Partners' Salary	=	Actual Profit after Salary
1	60,000	-	24,000	=	36,000
2	72,000	-	24,000	=	48,000
2	84,000	-	24,000	=	60,000

Average Actual Profit after Salary Partners

$$= \frac{36,000 + 48,000 + 60,000}{3}$$

$$= \frac{1,44,000}{3}$$

$= ₹48,000$

Super Profit = Average Actual Profit after Salaries – Normal Profit

$= 48,000 - 30,000$

$= ₹18,000$

Number of years purchase = 2

Super Profit = ₹18,000

∴ Goodwill = Super Profit x Number of Years Purchase

∴ Goodwill = $18,000 \times 2$

$= ₹36,000$

Question 21.

A and B are equal partners. They decide to admit C for 1/3rd share. For the purpose of admission of C, goodwill of the firm is to be valued at four years purchase of super profit. Average capital employed in the firm is ₹ 1,50,000. Normal rate of return may be taken as 15% p.a. Average profit of the firm is ₹ 40,000. Calculate value of goodwill.

Solution:

$$\text{Goodwill} = \text{Super Profit} \times \text{Number of Years Purchase}$$

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Normal Rate of Return}}{100}$$

$$= 1,50,000 \times \frac{15}{100}$$

$$= ₹22,500$$

$$\text{Super Profit} = \text{Average Maintainable Profit} - \text{Normal Profit}$$

$$= 40,000 - 22,500$$

$$= ₹17,500$$

$$\text{Number of years purchase} = 4$$

$$\text{Super Profit} = ₹17,500$$

$$\therefore \text{Goodwill} = \text{Super Profit} \times \text{Number of Years Purchase}$$

$$\therefore \text{Goodwill} = 17,500 \times 4 = ₹70,000$$

Question 22.

On 1st April, 2018, an existing firm had assets of ₹ 75,000 including cash of ₹ 5,000. Its creditors amounted to ₹ 5,000 on that date. The firm had a Reserve of ₹ 10,000 while Partners Capital Accounts showed a balance of ₹ 60,000. If Normal Rate of Return is 20% and goodwill of the firm is valued at ₹ 24,000 at four years purchase of super profit, find average profit per year of the existing firm.

Solution:

$$\text{Average Profit} = \text{Normal Profit} + \text{Super Profit}$$

$$\text{Capital Empolyed} = \text{Total Assets} - \text{Creditors}$$

$$= 75,000 - 5,000$$

$$= ₹70,000$$

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Normal Rate of Return}}{100}$$

$$= 70,000 \times \frac{20}{100}$$

$$= ₹14,000$$

$$\text{Goodwill of the firm} = ₹24,000$$

$$\text{Number of years purchase} = 4$$

$$\text{Super Profit} = \frac{24,000}{4}$$

$$= ₹6,000$$

$$\therefore \text{Average Profit} = \text{Normal Profit} + \text{Super Profit}$$

$$\therefore \text{Average Profit} = 14,000 + 6,000 = ₹20,000$$

Question 23.

The average profit earned by a firm is ₹ 1,00,000 which includes undervaluation of stock of ₹ 40,000 on an average basis. The capital invested in the business is ₹ 6,30,000 and the normal tare of return is 5%. Calculate goodwill of the firm on the basis of 5 time the super profit.

Solution:

Average Profit earned by a firm = Rs.1,00,000

Undervaluation of Stock = Rs.40,000

Average Actual Profit = Average Profit earned by a firm + Undervaluation of Stock

= 1,00,000 + 40,000 = Rs.1,40,000

$$\text{Normal Profit} = \text{Capital Investment} \times \frac{\text{Normal Rate of Return}}{100}$$

$$= 6,30,000 \times \frac{5}{100} = ₹31,500$$

Super Profit = Actual Average Profit - Normal Profit = 1,40,000 - 31, 500 = Rs.1,08, 500

Goodwill = Super Profit × Number of Times = 1,08,500 × 5 = Rs.5,42,500

Question 24.

The average profit earned by a firm is ₹ 7,50,000 which includes overvaluation of stock of ₹ 30,000 on an average basis. The capital invested in the business is ₹ 4,20,000 and the normal tare of return is 15%. Calculate goodwill of the firm on the basis of 3 time the super profit.

Solution:

Average Profit earned by a firm = Rs.7,50,000

Overvaluation of Stock = Rs.30,000

Average Actual Profit = Average Profit earned by a firm - Overvaluation of Stock

= 7,50,000 - 30,000 = Rs.7,20,000

$$\text{Normal Profit} = \text{Capital Investment} \times \frac{\text{Normal Rate of Return}}{100}$$

$$= 42,00,000 \times \frac{15}{100}$$

$$= ₹6,30,000$$

Super Profit = Actual Average Profit - Normal Profit = 7,20,000 - 6,30,000 = Rs. 90,000

Goodwill = Super Profit × Number of Times = 90,000 × 3 = Rs.2,70,000

Question 25.

Ayub and Amit are partners in a firm and they admit Jaspal into partnership w. e. f. 1st April, 2018. They agreed to value goodwill at 3 years purchase of Super Profit Method for which they decided to average profit of last 5 years. The profit for the last 5 years were:

Year Ended	Net Profit (₹)	
31st March, 2014	1,50,000	
31st March, 2015	1,80,000	
31st March, 2016	1,00,000	(Including abnormal loss of ₹ 1,00,000)
31st March, 2017	2,60,000	(Including abnormal gain (profit) of ₹ 40,000)
31st March, 2018	2,40,000	

The firm has total assets of ₹ 20,00,000 and Outside Liabilities of ₹ 5,00,000 as on that date. Normal Rate of Return in similar business is 10%.

Calculate value of goodwill.

Solution:

1.

Calculation Of Normal Profits (31st March)

Years	2014	2015	2016	2017	2018
Profit /Loss	1,50,000	1,80,000	1,00,000	2,60,000	2,40,000
Adjustment	---	---	1,00,000	(40,000)	---
Normal Profit	**1,50,000**	**1,80,000**	**2,00,000**	**2,20,000**	**2,40,000**

Total of Normal Profit = 1,50,000 + 1,80,000 + 2,00,000 + 2,20,000 + 2,40,000 = Rs.9,90,000

2. Calculation of Capital Employed

Capital employed = Total Assets - Outside liabilities

Capital employed = Rs.20,00,000 - Rs.5,00,000 = Rs.15,00,000

3. Calculation Super Profit

$$\text{Average Profit} = \frac{\text{Total Profit of Previous years}}{\text{No. of years}}$$

$$\text{Average Profit} = \frac{9,90,000}{5} = 1,98,000$$

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Normal Rate of Retrun}}{100}$$

$$\text{Normal Profit} = 15,00,000 \times \frac{10}{100} = 1,50,000$$

Super Profit = Average Profit - Normal Profit

Super Profit = 1,98,000 - 1,50,000 = 48,000

Goodwill = Super Profit × Number of Year Purchase = 48,000 × 3 = Rs.1,44,000

Question 26.

From the following information, calculate value of goodwill of the firm by applying Capitalisation Method: Total Capital of the firm ₹ 16,00,000.

Normal rate of return 10%. Profit for the year ₹ 2,00,000.

Solution:

$$\text{Goodwill} = \text{Capitalised Value of Profit} - \text{Actual Capital}$$

$$\text{Capitalised Value of Profit} = \frac{\text{Profit} \times 100}{\text{Normal Rate of Return}}$$

$$= \frac{2,00,000 \times 100}{10}$$

$$= ₹20,00,000$$

$$\text{Total Capital} = ₹16,00,000$$

$$\therefore \text{Goodwill} = 20,00,000 - 16,00,000$$

$$= ₹4,00,000$$

Question 27.

A business has earned average profit of ₹ 1,00,000 during the last few years. Find out the value of goodwill by capitalisation method, given that the assets of the business are ₹ 10,00,000 and its external liabilities are ₹ 1,80,000. The normal rate of return is 10%.

Solution:

$$\text{Goodwill} = \text{Capitalised Value of Average Profits} - \text{Actual Capital Employed}$$

$$\text{Capitalised Value of Average Profit} = \text{Average Profit} \times \frac{100}{\text{Normal Rate of Return}}$$

$$= 1,00,000 \times \frac{100}{10} = 10,00,000$$

$$\text{Actual Capital Employed} = 10,00,000 - 1,80,000 = 8,20,000$$

$$\text{Goodwill} = 10,00,000 - 8,20,000 = ₹1,80,000$$

Question 28.

Form the following particulars, calculate value of goodwill of a firm by applying Capitalisation of Average Profit Method:

(i) Profits of last five consecutive years ending 31st March are: 2018 – ₹ 54,000; 2017 – ₹ 42,000; 2016 – ₹ 39,000; 2015 – ₹ 67,000 and 2014 – ₹ 59,000.

(ii) Capitalisation rate 20%.

(iii) Net assets of the firm ₹ 2,00,000.

Solution:

$$\text{Goodwill} = \text{Capitalised Value of Profit} - \text{Net Assets (Capital Employed)}$$

$$\text{Average Profit} = \frac{54,000 + 42,000 + 39,000 + 67,000 + 59,000}{5}$$

$$= \frac{2,61,000}{5}$$

$$= ₹52,200$$

$$\text{Capitalised Value of Profit} = \text{Profit} \times \frac{100}{\text{Rate of Return}}$$

$$= 52,200 \times \frac{100}{20}$$

$$= ₹2,61,000$$

$$\text{Capitalised Value of Profit} = ₹2,61,000$$

$$\text{Net Assets (Capital Employed)} = ₹2,00,000$$

$$\therefore \text{Goodwill} = \text{Capitalised Value of Profit} - \text{Net Assets (Capital Employed)}$$

$$\therefore \text{Goodwill} = 2,61,000 - 2,00,000$$

$$= ₹61,000$$

Question 29.

A business has earned average profit of ₹ 4,00,000 during the last few years and the normal rate of return in similar business is 10%. Find value of goodwill by:

(i) Capitalisation of Super Profit Method, and

(ii) Super Profit Method if the goodwill is valued at 3 years purchase of super profits.

Assets of the business were ₹ 40,00,000 and its external liabilities ₹ 7,20,000.

Solution:

Given:

Average Profit = Rs.4,00,00

Normal Rate of Return = 10%

(i) Goodwill by Capitalisation of super profit

Capital Employed = Assets - External Liabilities = 40,00,000 - 7,20,000 = Rs.32,80,000

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Normal Rate of Return}}{100}$$

$$= 32,80,000 \times \frac{10}{100}$$

$$= ₹3,28,000$$

Super Profit = Actual Profit - Normal Profit = 4,00,000 - 3,28,000 = Rs.72,000

$$\text{Goodwill} = \text{Super Profits} \times \frac{100}{\text{Normal Rate of Return}}$$

$$\text{Goodwill} = 72,000 \times \frac{100}{10}$$

= Rs.7,20,000

(ii) Super Profit Method if the goodwill is valued at 3 years purchase of super profits

$$\text{Goodwill} = \text{Super Profits} \times \text{Number of Years of Purchase}$$

$$= 72,000 \times 3$$

$$= ₹2,16,000$$

Therefore, Goodwill is valued at Rs.2,16,000

Question 30.

A firm earns profit of ₹ 5,00,000. Normal Rate of Return in a similar type of business is 10%. The value of total assets (excluding goodwill) and total outsiders liabilities as on the date of goodwill are ₹ 55,00,000 and ₹ 14,00,000 respectively. Calculate value of goodwill according to Capitalisation of Super Profit Method as well as Capitalisation of Average Profit Method.

Solution:

(i) Calculation of goodwill by capitalization of super profit method

$$\text{Goodwill} = \text{Super Profit} \times \frac{100}{\text{Normal Rate of Return}}$$

$$\text{Goodwill} = 90,000 \times \frac{100}{10} = ₹9,00,000$$

$$\text{Capital Employed} = \text{Assets} - \text{External Liabilities}$$
$$= 55,00,000 - 14,00,000$$
$$= ₹41,00,000$$

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Normal Rate of Return}}{100}$$
$$= 41,00,000 \times \frac{10}{100}$$
$$= ₹4,10,000$$

Profit of the firm=₹5,00,000

$$\text{Super Profit} = \text{Actual profit} - \text{Normal Profit}$$
$$= 5,00,000 - 4,10,000$$
$$= ₹90,000$$

(ii) Calculation of Goodwill by capitalization of average profits method

Goodwill = Capitalised Value of Profit – Actual Capital Employed

$$\therefore \text{Goodwill} = 50,00,000^{*} - 41,00,000^{**} = ₹9,00,000$$

$$\text{Capitalised Value of Profit}^{*} = \text{Actual Profit} \times \frac{100}{\text{Normal Rate of Return}}$$
$$= 5,00,000 \times \frac{100}{10}$$
$$= ₹50,00,000$$

$$\text{Capital Employed}^{**} = \text{Assets} - \text{External Liabilities}$$
$$= 55,00,000 - 14,00,000$$
$$= ₹41,00,000$$

Question 31.

Average profit of the firm is ₹ 2,00,000. Total assets of the firm are ₹ 15,00,000 whereas Partners

Capital is ₹ 12,00,000. If normal rate of return in a similar business is 10% of the capital employed, what is the value of goodwill by Capitalisation of Super Profit?

Solution:

$$\text{Goodwill} = \text{Super Profit} \times \frac{100}{\text{Normal Rate of Retrun}}$$

$$\text{Goodwill} = 80,000 \times \frac{100}{10} = 8,00,000$$

Working Notes:

Calculation Super Profit

$$\text{Average Profit} = \frac{\text{Total Profit of Previous years}}{\text{No. of years}}$$

$$\text{Average Profit} = 2,00,000$$

Capital Employed

Capital employed = Total Assets - Outside liabilities

Capital employed = Rs.15,00,000 - Rs.3,00,000 = Rs.12,00,000

Normal Profit

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Normal Rate of Retrun}}{100}$$

$$\text{Normal Profit} = 12,00,000 \times \frac{10}{100} = 1,20,000$$

Super Profit

Super Profit = Average Profit - Normal Profit

Super Profit = 2,00,000 - 1,20,000 = 80,000

Question 32.

Rajan and Rajani are partners in a firm. Their capitals were Rajan ₹ 3,00,000; Rajani ₹ 2,00,000. During the year 2017-18, the firm earned a profit of ₹ 1,50,000. Calculate the value of goodwill of the firm by capitalisation of super profit assuming that the normal rate of return is 20%.

Solution:

$$\text{Goodwill} = \text{Super Profit} \times \frac{100}{\text{Normal Rate of Return}}$$

$$\text{Super Profit} = \text{Average Profit} - \text{Normal Profit}$$

$$\text{Average Profit} = 1,50,000 \text{ (given)}$$

$$\text{Normal Profit} = \text{Capital Employed} \times \text{Normal Rate of Return}$$

$$\text{Normal Profit} = (3,00,000+2,00,000) \times 20\% = 1,00,000$$

$$\text{Super Profit} = 1,50,000 - 1,00,000 = 50,000$$

$$\text{Goodwill} = 50,000 \times \frac{100}{20} = 2,50,000$$

Question 33.

Average profit of GS & amp Co. is ₹ 50,000 per year. Average capital employed in the business is ₹ 3,00,000. If the normal rate of return of capital employed is 10%, calculate goodwill of the firm by:
(i) Super Profit Method at three years purchase; and
(ii) Capitalisation of Super Profit Method.

Solution:

$$(1)\ \text{Goodwill} = \text{Super Profit} \times \text{Numbers of Years Purchase}$$

$$\text{Goodwill} = 20,000 \times 3 = 60,000$$

$$(2)\ \text{Goodwill} = \text{Super Profit} \times \frac{100}{\text{Normal Rate of Retrun}}$$

$$\text{Goodwill} = 20,000 \times \frac{100}{10} = 2,00,000$$

Working Notes:

Calculation Super Profit

$$\text{Average Profit} = \frac{\text{Total Profit of Previous years}}{\text{No. of years}}$$

$$\text{Average Profit} = 50,000$$

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Normal Rate of Retrun}}{100}$$

$$\text{Normal Profit} = 3,00,000 \times \frac{10}{100} = 30,000$$

Super Profit = Average Profit - Normal Profit

Super Profit = 50,000 - 30,000 = 20,000

Question 34.

From the following information, calculate value of goodwill of the firm:

(i) At three years purchase of Average Profit.

(ii) At three years purchase of Super Profit.

(iii) On the basis of Capitalisation of Super Profit.

(iv) On the basis of Capitalisation of Average profit.

Information:

(a) Average Capital Employed is ₹ 6,00,000.

(b) Net Profit/(Loss) of the firm for the last three years ended are:

31st March, 2108 – ₹ 2,00,000, 31st March, 2107 – ₹ 1,80,000, and 31st March, 2106 – ₹ 1,60,000.

(c) Normal Rate of Return in similar business is 10%.

(d) Remuneration of ₹ 1,00,000 to partners is to be taken as charge against profit.

(e) Assets of the firm (excluding goodwill, fictitious assets and not-trade investments) is ₹ 7,00,000 whereas Partners Capital is ₹ 6,00,000 and Outside Liabilities ₹ 1,00,000.

Solution:

(1) Goodwill = Average Profit x Numbers of Years Purchase

Goodwill = 80,000 x 3 = 2,40,000

(2) Goodwill = Super Profit x Numbers of Years Purchase

Goodwill = 20,000 x 3 = 60,000

$$(3)\ \text{Goodwill} = \text{Super Profit} \times \frac{100}{\text{Normal Rate of Retrun}}$$

$$\text{Goodwill} = 20,000 \times \frac{100}{10} = 2,00,000$$

(4) Goodwill = Capitalised Value - Net Asset

Goodwill = 8,00,000 - 6,00,000 = 2,00,000

Working Notes:

Calculation Super Profits

$$\text{Average Profit} = \frac{\text{Total Profit of Previous years}}{\text{No. of years}}$$

$$\text{Average Profit} = \frac{2,00,000 + 1,80,000 + 1,60,000}{3}$$

$$\text{Average Profit} = 1,80,000$$

Capital employed = Total Assets - Outside liabilities

Capital employed = Rs.7,00,000 - Rs.1,00,000 = Rs.6,00,000

$$\text{Normal Profit} = \text{Capital Employed} \times \frac{\text{Normal Rate of Retrun}}{100}$$

$$\text{Normal Profit} = 6,00,000 \times \frac{10}{100} = 60,000$$

Super Profit = Average Profit (Adjusted) - Normal Profit

Super Profit = Rs.80,000 - Rs.60,000 = Rs.20,000