+2 Accountancy
Solution Book

TEXTBOOK SELF-EXAMINATION QUESTIONS SOLVED

I. Choose the correct answer.

1. Which of the following statements is true?

(a) Goodwill is an intangible asset
(b) Goodwill is a current asset
(c) Goodwill is a fictitious asset
(d) Goodwill cannot be acquired

Ans. (a) Goodwill is an intangible asset

2. Super profit is the difference between

(a) Capital employed and average profit
(b) Assets and liabilities
(c) Average profit and normal profit
(d) Current year's profit and average profit

Ans. (c) Average profit and normal profit

3. The average rate of return of similar concerns is considered as

(a) Average profit
(b) Normal rate of return
(c) Expected rate of return
(d) None of these

Ans. (b) Normal rate of return

4. Which of the following is true?

(a) Super profit = Total profit / number of years
(b) Super profit = Weighted profit / number of years
(c) Super profit = Average profit – Normal profit
(d) Super profit = Average profit × Years of purchase

Ans. (c) Super profit = Average profit – Normal profit

5. Identify the incorrect pair

(a) Goodwill under Average profit method - Average profit × Number of years of purchase
(b) Goodwill under Super profit method - Super profit × Number of years of purchase
(c) Goodwill under Annuity method - Average profit × Present value of annuity factor
(d) Goodwill under Weighted average profit method - Weighted average profit × Number of years of purchase

Ans. (c) Goodwill under Annuity method - Average profit × Present value of annuity factor

6. When the average profit is ₹ 25,000 and the normal profit is ₹ 15,000, super profit is

(a) ₹ 25,000 (b) ₹ 5,000 (c) ₹ 10,000 (d) ₹ 15,000

Ans. (c) ₹ 10,000

7. Book profit of 2017 is ₹ 35,000; non-recurring income included in the profit is ₹ 1,000 and abnormal loss charged in the year 2017 was ₹ 2,000, then the adjusted profit is

(a) ₹ 36,000 (b) ₹ 35,000 (c) ₹ 38,000 (d) ₹ 34,000

Ans. (a) ₹ 36,000

8. The total capitalised value of a business is ₹ 1,00,000; assets are ₹ 1,50,000 and liabilities are ₹ 80,000. The value of goodwill as per the capitalisation method will be

(a) ₹ 40,000 (b) ₹ 70,000 (c) ₹ 1,00,000 (d) ₹ 30,000

Ans. (d) ₹ 30,000

II. Very Short Answer Questions:

1. What is goodwill?

Ans. Goodwill is the good name or reputation of the business which brings benefit to the business. It enables the business to earn more profit. It is the present value of a firm's future excess earnings.

2. What is acquired goodwill?

Ans. Goodwill acquired by making payment in cash or kind is called acquired or purchased goodwill. When a firm purchases an existing business, the price paid for purchase of such business may exceed the net assets (Assets – Liabilities) of the business acquired.

3. What is super profit?

Ans. Super profit is the excess of average profit over the normal profit of a business.

Super profit = Average profit – Normal profit.

Average profit is calculated by dividing the total of adjusted actual profit of certain number of years by the total number of such years. Normal profit is the profit earned by the similar business firms under normal conditions.

Normal profit = Capital employed × Normal rate of return

Capital employed = Fixed assets + Current assets – Current liabilities

4. What is normal rate of return?

Ans. It is the rate at which profit is earned by similar business entities in the industry under normal circumstances.

5. State any two circumstances under which goodwill of a partnership firm is valued?

Ans. (i) When there is a change in the profit sharing ratio.

(ii) When a new partner is admitted into a firm.

(iii) When an existing partner retires from the firm or when a partner dies.

(iv) When a partnership firm is dissolved.

III. Short Answer Questions:

1. State any six factors determining goodwill.

Ans. (i) Profitability of the firm

(ii) Favourable location of the business enterprise

(iii) Good quality of goods or services offered

(iv) Tenure of the business enterprise

(v) Efficiency of management

(vi) Degree of competition

(vii) Other factors

2. How is goodwill calculated under the super profits method?

Ans. (a) **Purchase of super profit method:** Goodwill is calculated by multiplying the super profit by a certain number of years of purchase.

= Goodwill = super profit× No. of years of purchase

(b) **Annuity method:** Value of goodwill is calculated by multiplying the super profit with the present value of annuity.

Goodwill = Super profit × Present value annuity factor

(c) **Capitalisation of super profit method:** Goodwill = $\frac{\text{Super profit}}{\text{Normal rate of return}} \times 100$

3. How is the value of goodwill calculated under the capitalisation method?

Ans. **Capitalisation method:**

Under Capitalisation method, goodwill is the excess of capitalised value of average profit of the business over the actual capital employed in the business.

Goodwill = Total capitalised value of the business – Actual capital employed

The total capitalised value of the business is calculated by capitalising the average profits on the basis of the normal rate of return.

Capitalised value of the business = $\frac{\text{Average profit}}{\text{Normal rate of return}} \times 100$

Actual capital employed = Fixed assets (excluding goodwill) + Current assets – Current liabilities

4. Compute average profit from the following information.

Calculation of Average profit:

2016 – ₹ 8,000; 2017 – ₹ 10,000; 2018 – ₹ 9,000

2016 –	₹ 8,000
2017 –	₹ 10,000
2018 –	₹ 9,000
Total profit	27,000

Average profit = $\frac{\text{Total profit}}{\text{Number of years}} = \frac{27,000}{3}$ = ₹ 9,000

Valuation of goodwill = ₹ 9,000

5. Calculate the value of goodwill at 2 years purchase of average profit when average profit is ₹ 15,000.

Ans. Goodwill: ₹ 30,000

IV. Exercises

Simple average profit method:

1. The following are the profits of a firm in the last five years:

Year	Profit
2014	₹ 10,000
2015	₹ 11,000
2016	₹ 12,000
2017	₹ 13,000
2018	₹ 14,000
Total profit	₹ 60,000

$$\text{Average profit} = \frac{\text{Total profit}}{\text{Number of years}}$$

$$= \frac{23{,}000}{5} = ₹\ 12{,}000$$

Valuation of goodwill = Average profit × No. of years purchase

= ₹12,000 × 2 years

= ₹ 24,000

2. From the following information, calculate the value of goodwill on the basis of 3 years purchase of average profits of last four years.

Year	Result	Amount ₹
2015	Profit	5,000
2016	Profit	8,000
2017	Loss	3,000
2018	Profit	6,000

Calculation of goodwill:

	Year		Profit
= Total profit			
	2015	–	5,000
	2016	–	8,000
	2018	–	6,000
			19,000
(–) 2017 loss			3,000
Total profit			16,000

$$\text{Average profit} = \frac{\text{Total profit}}{\text{Number of years}} = \frac{16{,}000}{4} = ₹\ 4{,}000$$

Valuation of goodwill = Average profit × No. of years purchase

= ₹ 4,000 × 3 = ₹ 12,000

3. From the following information relating to a partnership firm, find out the value of its goodwill based on 3 years purchase of average profits of the last 4 years:

(a) Profits of the years 2015, 2016, 2017 and 2018 are ₹ 10,000, ₹ 12,500, ₹ 12,000 and ₹ 11,500, respectively.

(b) The business was looked after by a partner and his fair remuneration amounts to ₹ 1,500 per year. This amount was not considered in the calculation of the above profits.

Valuation of goodwill

Calculation of average profit

	Year	Profit
	2015	10,000
	2016	12,500
	2017	12,000
	2018	11,500
Total profit		46,000

$$\text{Average profit} = \frac{\text{Total profit}}{\text{Number of years}} = \frac{46,000}{4} = ₹\ 11,500$$

(–) Remuneration = ₹ 1,500

Net average profit = ₹ 10,000

Valuation of goodwill = Average profit × No. of years purchase

= ₹ 10,000 × 3

= ₹ 30,000

4. From the following information relating to Sridevi enterprises, calculate the value of goodwill on the basis of 4 years purchase of the average profits of 3 years.

(a) Profits for the years ending 31st December 2016, 2017 and 2018 were ₹ 1,75,000, ₹ 1,50,000 and ₹ 2,00,000, respectively.

(b) A non-recurring income of ₹ 45,000 is included in the profits of the year 2016.

(c) The closing stock of the year 2017 was overvalued by ₹ 30,000.

Calculation of adjusted profit

Particulars	2016 (₹)	2017 (₹)	2018 (₹)
Profit	1,75,000	1,50,000	2,00,000
Less: Non- recurring income	45,000	–	–
	1,30,000	1,50,000	2,00,000
Less: Over valuation of closing stock	–	30,000	–
	1,30,000	1,20,000	2,00,000
Add: Over valuation of opening stock	–	–	30,000
Profit after adjustments	1,30,000	1,20,000	2,30,000

$$\text{Average profit} = \frac{\text{Total profit}}{\text{Number of years}}$$

Total profit 1,60,000 + 1,20,000 + 23,000

$$\text{Average profit} = \frac{4,80,000}{3} = ₹\ 1,60,000$$

Goodwill = Average profit × No. of year purchase

= ₹ 1,60,000 × 4 = ₹ 64,00,000

5. The following particulars are available in respect of the business carried on by a partnership firm:

(i) Profits earned: 2016: ₹ 25,000; 2017: ₹ 23,000 and 2018: ₹ 26,000.

(ii) Profit of 2016 includes a non-recurring income of ₹ 2,500.

(iii) Profit of 2017 is reduced by ₹ 3,500 due to stock destroyed by fire.

(iv) The stock was not insured. But, it is decided to insure the stock in future. The insurance premium is estimated to be ₹ 250 per annum.

You are required to calculate the value of goodwill of the firm on the basis of 2 years purchase of average profits of the last three years.

Calculation of adjusted profit

Particulars	2016 (₹)	2017 (₹)	2018 (₹)
Profit	25,000	23,000	26,000
(–) Non- recurring income	2,500	–	–
(+) Stock destroyed fire	22,500	3,500	–
	–		
(–) Insurance premium	22,500	26,500	26,000
	250	250	250
Profit after adjustments	22,250	26,250	25,750

Total profit = 22,250 + 26,250 + 25,750 = ₹ 74,250

$$\text{Average profit} = \frac{\text{Total profit}}{\text{Number of years}} = \frac{74,250}{3} = ₹\ 24,750$$

Valuation of goodwill = Average profit × No. of year purchase

= ₹ 24,750 × 2 years = ₹ 49,500

Weighted average profit method:

6. Find out the value of goodwill at three years purchase of weighted average profit of last four years.

Year	Profit (₹)	Weight
2015	10,000	1
2016	12,000	2
2017	16,000	3
2018	18,000	4

Calculation of weighted average profit

Year	Profit (₹)	Weight	Amount (₹)
2015	10,000	1	10,000
2016	12,000	2	24,000
2017	16,000	3	48,000
2018	18,000	4	72,000
Total		10	1,54,000

$$\text{Weighted average profit} = \frac{\text{Total of weighted profits}}{\text{Total of weights}} = \frac{1,54,000}{10} = ₹\ 15,400$$

Goodwill = Weighted average profit × No. of years purchase

= ₹ 15,400 × 3 = ₹ 46,200

Purchase of super profit method:

7. From the following details, calculate the value of goodwill at 2 years purchase of super profit:

(a) Total assets of a firm are ₹ 5,00,000

(b) The liabilities of the firm are ₹ 2,00,000

(c) Normal rate of return in this class of business is 12.5 %.

(d) Average profit of the firm is ₹ 60,000.

Ans. Capital employed = fixed assets + current assets – current liabilities

= 5,00,000 – 2,00,000 = 3,00,000

Normal profit = Capital employed × Normal rate of return

$$= 3,00,000 \times \frac{12.5}{100} = 3,75,000$$

Super profit = Average profit – Normal profit

= 60,000 – 37,500 = 22,500

Goodwill = Super profit x Number of years of purchase

= ₹ 22,500 × 2

= ₹ 45,000

8. A partnership firm earned net profits during the last three years as follows:

2016: ₹ 20,000; 2017: ₹ 17,000 and 2018: ₹ 23,000

The capital investment of 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 capital employed in the business. Calculate the value of goodwill on the basis of 2 years purchase of super profit.

Ans. Calculation of average profit

Year	Profit
2016	20,000

	2017	17,000
	2018	23,000
Total profit		60,000

$$\text{Average profit} = \frac{\text{Total profit}}{\text{Number of years}} = \frac{60,000}{3} = ₹\ 20,000$$

Normal profit = Capital employed × Normal rate of return

$$= 80,000 \times \frac{15}{100} = 12,000$$

Super profit = 8,000

Valuation of goodwill = Super profit × No. of years purchase

= ₹ 8,000 × 2

= ₹ 16,000

Annuity method:

9. From the following information, calculate the value of goodwill under annuity method:

(i)	Average profit	₹ 14,000
(ii)	Normal profit	₹ 4,000
(iii)	Normal rate of return	15%
(iv)	Years of purchase of goodwill	5

Present value of ₹ 1 for 5 years at 15% per annum as per the annuity table is 3.352

Ans. Super profit = Average profit – Normal profit

= 14,000 – ₹ 4,000

= ₹ 10,000

Goodwill = Super profit × Present value of annuity factor

= ₹ 10,000 × 3.352 = ₹ 33,520

Capitalisation of super profit method

10. Find out the value of goodwill by capitalising super profits:

(a) Normal Rate of Return 10%

(b) Profits for the last four years are ₹ 30,000, ₹ 40,000, ₹ 50,000 and ₹ 45,000.

(c) A non-recurring income of ₹ 3,000 is included in the above mentioned profit of ₹ 30,000.

(d) Average capital employed is ₹ 3,00,000.

Ans.

	Year			
Particulars	I	II	III	IV
Profits	30,000	40,000	50,000	45,000
(–) Non recurring income	3,000	–	–	–
	27,000	40,000	50,000	45,000

Total profit = 27,000 + 40,000 + 50,000 + 45,000 = 1,62,000

$$\text{Average profit} = \frac{\text{Total profit}}{\text{Number of years}} = \frac{1,62,000}{4} = ₹\ 40,500$$

Normal profit = Capital employed × Normal rate of return

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

Super profit = 10,500

$$\text{Capitalisation super profit method} = \frac{\text{Super profit}}{\text{Normal rate of return}} \times 100$$

$$= \frac{10,500}{10} \times 100 = ₹\ 1,05,000$$

Capitalisation method:

11. From the following information, find out the value of goodwill by capitalisation method:

(i) Average profit ₹ 20,000

(ii) Normal rate of return 10%

(iii) Tangible assets of the firm ₹ 2,20,000

(iv) Liabilities of the firm ₹ 70,000

Ans. Capital Assets – Liabilities

= 2,20,000 – 70,000 = ₹ 1,50,000

$$\text{Capitalised value of business} = \frac{\text{Average profit}}{\text{Normal rate of return}} \times 100$$

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

Value of goodwill = Total capitalised average profit – Capital employed

= 2,00,000 – 1,50,000

= ₹ 50,000