Chapter 1

Valuation of Goodwill and Shares

MEANING OF GOODWILL

Goodwill is an intangible but not fictitious assets that means it has some realisable value. From the accountant's point of view, goodwill, in the sense of attracting custom, has little significance unless it has a saleable value. To the accountant, therefore, goodwill may be said to be that element arising from the reputation, connection, or other advantages possessed by a business which enables it to earn greater profits than the return normally to be expected on the capital represented by the net tangible assets employed in the business. In considering the return normally to be expected, regard must be had to the nature of the business, the risks involved, fair management remuneration and any other relevant circumstances.

The goodwill possessed by a firm may be due, *inter alia*, to the following:

(a) The location of the business premises. The nature of the firm's products or the reputation of its service.

(b) The possession of favourable contracts, complete or partial monopoly, etc.

(c) The personal reputation of the promoters.

(d) The possession of efficient and contented employees.

(e) The possession of trademarks, patents or a well known business name.

(f) The continuance of advertising campaigns.

(g) The maintenance of the quality of the firm's product, and development of the business with changing conditions.

The need for evaluating goodwill may arise in the following cases:

(a) When the business or when the company is to be sold to another company or when the company is to be amalgamated with another company;

(b) When, stock exchange quotations not being available, shares have to be valued for taxation purposes, gift tax, etc.;

(c) When a large block of shares, so as to enable the holder to exercise control over the company concerned, has to be bought or sold; and

(d) When the company has previously written off goodwill and wants its written back.

In valuation of goodwill, consideration of the following factors will have a bearing:

(a)   Nature of the industry, its history and the risks to which it is subject to.

(b)   Prospects of the industry in the future.

(c)   The company's history – its past performance and its record of past profits and dividends.

(d)   The basis of valuation of assets of the company and their value.

(e)   The ratio of liabilities to capital.

(f)   The nature of management and the chance for its continuation.

(g)   Capital structure or gearing.

(h)   Size, location and reputation of the company's products.

(i)   The incidence of taxation.

(j)   The number of shareholders.

(k)   Yield on shares of companies engaged in the same industry, which are listed in the Stock Exchanges.

(l)   Composition of purchasers of the products of the company.

(m)   Size of block of shares offered for sale since for large blocks very few buyers would be available and that has a depressing effect on the valuation. Question of control, however, may become important, when large blocks of shares are involved.

(n)   The major factor of valuation of goodwill is the profits of the company. One who pays for goodwill looks to the future profit. The profits that are expected to be earned in future are extremely important for valuation of goodwill. The following are the important factors that have a bearing on future profits.

  (i)   Personal skill in management.

  (ii)   Nature of business.

  (iii)   Favourable location.

  (iv)   Access to supplies.

  (v)   Patents and trademarks protection.

  (vi)   Exceptionally favourable contracts and

  (vii)   Capital requirements and arrangement of capital.

(o)   Estimation of the profits expected to be earned by the firm and the amount of capital employed to earn such profits, are to be computed carefully.

(p)   Market reputation which the company and its management enjoys.

(q)   Returns expected by investors in the industry to which the firm or company belongs.

CONCEPT OF GOODWILL

When one company buys another company, the purchasing company may pay more for the acquired company than the fair market value of its net identifiable assets (tangible assets plus identifiable intangibles, net of any liabilities assumed by the purchaser). The amount by which the purchase price exceeds the fair value of the net identifiable assets is recorded as an asset of the acquiring company. Although sometimes reported on the balance sheet with a descriptive title such as "excess of acquisition cost over net assets acquired", the amount is customarily called goodwill.

Goodwill arises only as part of a purchase transaction. In most cases, this is a transaction in which one company acquires all the assets of another company for some consideration other than an exchange of common stock. The buying company is willing to pay more than the fair value of the

identifiable assets because the acquired company has a strong management team, a favorable reputation in the marketplace, superior production methods, or other unidentifiable intangibles.

The acquisition cost of the identifiable assets acquired is their fair market value at the time of acquisition. Usually, these values are determined by appraisal, but in some cases, the net book value of these assets is accepted as being their fair value. If there is evidence that the fair market value differs from net book value, either higher or lower, the market value governs.

Illustration 1: Company X acquires all the assets of company Y, giving Company Y ₹ 15 lakhs cash. Company Y has cash ₹ 50,000 accounts receivable that are believed to have a realizable value of ₹ 60,000, and other identifiable assets that are estimated to have a current market value of ₹ 11 lakhs.

Particulars	₹	₹
Total purchase price		15,00,000
Less: Cash acquired	50,000	
Accounts receivable	60,000	
Other identifiable assets (estimated)	11,00,000	12,10,000
Goodwill		**2,90,000**

This extra amount of ₹ 2,90,000 paid over an above, Net worth ₹ 12,10,000 is goodwill, which is a capital loss for purchasing company and to be shown on assets side of Balance Sheet. This entire amount will be written off against revenue profit, i.e., Profit and Loss Account over period of time.

Types of Valuing Goodwill

There are basically two types of valuing goodwill: (a) Simple profit method and (b) Super profit method.

(a) Simple Profit Method: Goodwill is generally valued on the basis of a certain number of years' purchase of the average business profits of the past few years. While calculating average profits for the purposes of valuation of goodwill, certain adjustments are made. Some of the adjustments are as follows:

Trading Profit/Business Profit/Recurring Profit/Normal Profit (of past year)

Particulars	1st Year	2nd Year	3rd Year
Net Profit before Adjustment and Tax	xx	xx	xx
Less: Non-trading Income (i.e., Income from Investment/Asset)			
Less: Non-recurring Income (i.e., Profit on Sale of Investment/Asset)	(xx)	(xx)	(xx)
Add: Non-recurring Loss (i.e., Loss on Sale of Investment/Asset)	xx	xx	xx
Trading Profit after Adjustment and before Tax.	xxx	xxx	xxx

Calculation of Average profit:

(a) Simple Average Profit = $\dfrac{\text{Total profit of past years}}{\text{Total number of past years}}$

(b) Weighted Average profit:

Years	Trading Profit (a)	Weight (b)	Product (a × b)
2014	xx	1	xx
2015	xx	2	xx
2016	xx	3	xx
		6	**xxx**

$$\text{Weighted Average Profit} = \frac{\text{Total product}}{\text{Total weight}}$$

Notes: If past profits are in increasing trend, then calculate Average Profit by weighted average method or otherwise simple average method.

Calculation of FMP (Future Maintainable Profit):

(a) All actual expenses and losses not likely to occur in the future are added back to profits.

(b) All actual income and gain not likely to occur in the future are deducted from profits.

(c) All profits likely to come in the future are added and all expenses likely to come in future are deducted.

Particulars	₹
Simple/Weighted Average Profit before Tax	XX
Add: Expenses incurred in past not to be incurred in future	XX
(i.e., Rent paid in past not payable in future)	
Less: Expenses not incurred in past to be incurred in future	
(i.e., Rent not paid in past payable in future)	(XX)
Less: Notional management Remuneration	(XX)
Future maintainable profit before tax	XXX
Less: Tax (If rate is not given, assume 50%)	(XX)
Future maintainable profit after tax	XXX

After adjusting profit in the light of future possibilities, average profit are estimated and then the value of goodwill is estimated.

This method is a simple one and has nothing to recommend since goodwill is attached to profits over and above what one can earn by starting a new business and not to total profits.

It ignores the amount of capital employed. for earning the profit. However, it is usual to adopt this method for valuing the goodwill of the practice of a professional person such as a chartered accountant or a doctor.

Calculation of Capital Employed and Average Capital Employed

Particulars	₹	₹
Tangible Trading Assets (at agreed/adjustment value) (except: intangible, non-trading/ fictitious assets):		
Plant and Machinery	xx	
Land and Building	xx	
Furniture and Fixtures	xx	
Stock	xx	
Cash/Bank	xx	xxx
Less: External Liability (at agreed/adjustment value) (except: capital and reserves and surplus):		
Loans	xx	
Debentures	xx	
Creditors	xx	
O/s Expenses, etc.	xx	xxx
Capital Employed		xxx

$$\therefore \text{Average Capital Employed} = \frac{\text{Opening Capital Employed} + \text{Closing Capital Employed}}{2} \quad \text{OR}$$

$$\text{Average Capital Employed} = \text{Closing Capital employed} - [\frac{1}{2} \text{ of Current year's profit} + \text{Current year's dividend}]$$

OR

Average Capital Employed = Opening Capital Employed + [½ of Current year's profit + Current year's dividend]

(b) Super Profit Method: The future maintainable profits of the firm are compared with the normal profits for the firm. Normal earnings of a business can be judged only in the light of normal rate of earning and the capital employed in the business. Hence, this method of valuing goodwill would require the following information:

 (i) A normal rate of return for representative firms in the industry.

 (ii) The fair value of capital employed.

The normal rate of earning is that rate of return which investors in general expect on their investments in the particular type of industry. Normal rate of return depends upon the risk attached to the investment, bank rate, market, need, inflation and the period of investment.

Normal Rate of Returns (NRR)

It is the rate at which profit is earned by normal business under normal circumstances or from similar course of business. Normal Rate of Returns means rate of profit on capital employed which is normally earned by others in a similar type of business. It will always be given in the problem in form of percentages.

Or

$$NRR = \text{Rate of Risk} + \text{Rate of Returns or } \frac{\text{Dividend per share}}{\text{Market price per share}} \times 100$$

As the capital employed may be expressed as aggregate of share capital and reserves less the amount of non-trading assets such as investments, the capital employed may also be ascertained by adding up the present values of trading assets and deducting all liabilities. Super profit is the simple difference between future maintainable operating profit and normal profit.

Illustration 2:

Rishi Computers Ltd. gives you the following summarised balance sheet as at 31st December, 2014.

Liabilities	₹	Assets	₹	₹
Preference Share Capital	5,00,000	Fixed Assets:		
Equity Share Capital	20,00,000	Cost	50,00,000	
Reserves and surplus	25,00,000	Depreciation	30,00,000	20,00,000
Long-term Loans	27,00,000	Capital Work-in-progress		40,00,000
Current Liabilities and Provisions	15,00,000	Investment (10%)		5,00,000
		Current Assets		25,00,000
		Underwriting Commission		2,00,000
	92,00,000			**92,00,000**

The company earned a profit of ₹ 18,00,000 before tax in 2014. The capital work-in-progress represents additional plant equal to the capacity of the present plant; if immediately operational there being no difficulty in sales. With effect from 1st January, 2015, two additional Works Managers are being appointed at ₹ 1,00,000 p.a. Ascertain the future maintainable profit and the capital employed, assuming the present replacement cost of fixed assets is ₹ 1,00,00,000 and the annual rate of depreciation is 10% on original cost.

Solution:

Normal Profit: Suppose investors are satisfied with a 18% return. In the above example, the normal profit will be ₹ 11,34,000, i.e., 18% of ₹ 63 lakhs.

The following are some items which generally require adjustment in arriving at the average of the past earnings:

1. Exclusion of material non-recurring items such as loss of exceptional nature through strikes, fires, floods and theft, etc., profit or loss of any isolated transaction not being part of the business of the company.

2. Exclusion of income and profits and losses from non-trading assets.

3. Exclusion of any capital profit or loss or receipt or expense included in the profit and loss account.

4. Adjustments for any matters suggested by notes, appended to the accounts or by qualifications in the Auditor's Report, such as provision for taxation and gratuities, bad debts, under or over provision for depreciation, inconsistency in valuation of stock, etc.

5. Depreciation is an important item that calls for careful review. The valuer may adopt book depreciation provided he is satisfied that the value was realistic and the method was suitable for the nature of the company and they were consistently applied from year to year. But imbalances do arise in cases where consistently written down value method was in use and heavy expenditure in the recent past has been made in rehabilitating or expanding fixed assets, since the depreciation charges would be unfairly heavy and would prejudice the seller. Under such circumstances, it would be desirable to readjust depreciation suitably as to bring a more equitable charge in the profits meant for averaging.

Another important factor comes up for consideration in averaging past profits and that is the trend of profits earned. It is imperative that estimation of maintainable profits be based on the only available record, i.e., the record of past earnings, but indiscrete use of past results may lead to an entirely fallacious and unrealistic result.

Where the profits of a company are widely fluctuating from year to year, an average fails to aid future projection. In such cases, a study of the whole history of the company and of earnings of a fairly long period may be necessary. If the profits of a company do not show a regular trend upward or downward, an average of the cycle can usefully be employed for projection of future earnings.

In some companies, profits may record a distinct rising or falling trend from year; in these circumstances, a simple average falls to consider a significant factor, namely, trend in earnings.

The shares of a company which record a clear upward trend of past profits would certainly be more valuable than those of a company whose trend of past earnings indicates a downtrend. In such cases, a weighted average giving more weight to the recent years than to the past is appropriate. A simple way of weighing is to multiply the profits by the respective number of the years arranged chronologically so that the largest weight is associated with the most recent past year and the least for the remotest.

Future Profitability Projections: Project is more a matter of intelligent guesswork since it is essentially an estimation of what will happen in the risky and uncertain future. The average profit earned by a company in the past could be normally taken as the average profit that would be maintainable by it in the future, if the future is considered basically as a continuation of the past. If future performance is viewed as departing significantly from the past, then appropriate adjustments will be called for before accepting the past average profit as the future maintainable profit of the company.

There are three methods of calculating goodwill based on super profit. The methods and formulae are as follows:

Purchase of Super Profit Method: Goodwill, as per this method, is Super Profit multiplied by a certain number of years. Under this method, an important point to note is that the number of years of purchase as goodwill will differ from industry to industry and from firm to firm. Theoretically, the number of years is to be determined with reference to the probability of a new business catching up with an old business. Suppose it is estimated that in two years' time a business, if started now will be earning about the same profits as an old business is earning now, goodwill will be equivalent to two times the super profits. In the example given above, goodwill will be ₹ 12.12 lakhs, i.e., ₹ 6.06 lakhs × 2 years.

Annuity Method of Super Profit: Goodwill, in this case, is the discounted value of the total amount calculated as per purchase method. The idea behind super profits methods is that the amount paid for goodwill will be recouped during the coming few years. But, in this case, there is a heavy loss of interest. Hence, properly speaking what should be paid now is only the present value of super profits paid annually at the proper rate of interest. Tables show that the present value 18% of Re. 1 received annually two years is 1.566. In the above example, the value of goodwill under this method will be 1.3 × ₹ 6.06 lakhs or ₹ 9.49 lakhs.

Capitalisation of Super Profit Method: This method tries to find out the amount of capital needed for earning the super profit.
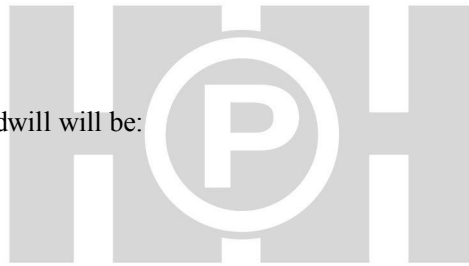
The formula is:

$$= \frac{\text{Super Profit}}{\text{NRR}} \times 100$$

In above example, Goodwill will be:

$$= \frac{6.06 \text{ lakhs} \times 100}{18}$$

$= ₹ 33.67$ lakhs

Given in the Problems:
  (a) Information of old firms assets and liabilities.
  (b) Information regarding past or profit.
  (c) Adjustment valuation of goodwill.

Required to Prepare:
  Valuation of goodwill by different methods.

Steps, Method and Formula for Calculation of Goodwill:

I. Goodwill by purchase of average profit method:

Steps:
  (a) Find out average trading profit.
  (b) Find out the number of years purchase (it will always be given in problem).
  (c) Goodwill = Number of year of purchase × Average trading profit.

II. Goodwill by purchase of future maintainable profit method:

Steps:
  (a) Find out future maintainable profit.
  (b) Number of year purchase (given in problem).
  (c) Goodwill = Number of years of purchase × Future maintainable profit.

III. Goodwill by capitalisation of future maintainable profit method:

(a) Find out future maintainable profit.

(b) Find out capitalised value of future maintainable profit

Capitalisation Value of Future Maintainable Profit $= \dfrac{\text{FMP}}{\text{NRR}} \times 100$

(c) Calculate Capital Employed.

(d) Goodwill = Capitalised Value of FMP – Capital Employed

IV. Goodwill by purchase of super profit method:

(a) Find out average trading profit.

(b) Find out future maintainable profit.

(c) Find out capital employed.

(d) Find out Normal Rate Return (always given in the problem in terms of %).

(e) Find out number of year of purchase (given in the problem).

(f) Find out normal profit:

Normal Profit $= \dfrac{\text{Capital Employed} \times \text{NRR}}{100}$

(g) Find out super profit:

Super profit = Future maintainable profit – Normal profit

(h) Goodwill = Number of year purchase × Super profit

V. Goodwill by capitalisation of super profit method:

(a) Calculate super profit as discussed above.

(b) Goodwill $= \dfrac{\text{Super Profit} \times 100}{\text{NRR}}$

VI. Goodwill by present value of super profit method:

(a) Calculate super profit as discussed above.

(b) Goodwill = Annuity Rate × Super Profit

Note: Annuity Rate will always be given in the problem.

Illustration 3: X agreed to purchase the business of Y on 30th June, 2016. Profits earned by Y for the three preceding years were as below:

Year ending	₹
31/12/2013	82,000
31/12/2014	80,000
31/12/2015	84,000

The profit for the year 2014 includes an abnormal income of ₹ 3,000. The profit for the year 2015 is after writing off a loss due to theft of ₹ 4,000. At present, the assets of the business are not insured. X wants to take a comprehensive policy and has ascertained that an annual premium of ₹ 400 would have to be paid. X would like to manage the business whole time and this would involve giving up the present job in which he is drawing ₹ 2,000 per month. If X manages the business, the employment of the manager who is looking after the business for a salary of ₹ 1,500 per month can be terminated and X will draw a salary of ₹ 2,000 per month from the business. Calculate the goodwill if both the parties have agreed to value it at 2 year's purchase of average profits.

Solution:

Particulars	₹	₹
Profit for the year 2013		82,000
Profit for the year 2014	80,000	
Less: Abnormal Income	3,000	77,000
Profit for the year 2015	84,000	
Add: Loss due to theft	4,000	88,000
		2,47,000
Average Profits (2,47,000/3)		82,333.33
Less: Expenses to be paid-up future Insurance Premium	400	
X's salary (2,000 × 12)	24,000	(24,400)
		57,933.33
Add: Manager's salary (1,500 × 12)		18,000.00
Expected average annual profits		**75,933.33**

Goodwill = Expected average annual profits × Number of years of purchase

= ₹ (75,933.33 × 2) = ₹ 1,51,866.66

Illustration 4: P is negotiating with M for the purchase of the latter's business. It was decided to value goodwill according to the super profit method. M has been running the business only for the three years and hence P would like to attach weights for the profits of the three years in such a way that the most recent profits would be assigned a higher weight than the other year's profits. The profits of the past three years are as follows:

Year	₹
2013	36,000
2014	40,000
2015	38,000

Calculate the annual average profits.

Solution: Since P would like to attach a higher weightage to the profits of 2001, one method of weighting would be:

Year	Weight
2013	1
2014	2
2015	3

The weighted average annual profits of the business may be calculated as follows:

Year	Profits (₹)	Weights	Product (₹)
2013	36,000	1	36,000
2014	40,000	2	80,000
2015	38,000	3	1,14,000
		6	**2,30,000**

∴ Weighted Average Annual Profits $= \dfrac{\text{Total Product}}{\text{Total Weight}}$

$= \dfrac{2,30,000}{6}$

Average annual profit = ₹ 38,333

Illustration 5: The following particulars are available in the books of Bharti Telecom.

(a) Capital employed ₹ 1,50,000

(b) Trading profit after tax

2012	₹ 1,12,200
2013	₹ 1,15,000
2014	₹ 1,02,000 (loss)
2015	₹ 1,21,000

(c) Market rate of interest on investment 8%.

(d) Rate of risk return on capital invested in business 2%.

(e) Remuneration from alternative employment of the proprietor (if not engaged in business ₹ 13,600 p.a.).

You are required to compute the value of goodwill on the basis of 3 years' purchase of super profits of the business calculated on the average profit of the last four years.

Solution:

(a) Calculation of Average Profits:

Year	₹
2012	1,12,200
2013	1,15,000
2014	(1,02,000)
2015	1,21,000
	2,46,200

$$\text{Average Profit} = \frac{2,46,200}{4} = 61,550$$

(b) Calculation of Super Profits:

Particulars	₹
Average Profits	61,550
Less: Remuneration	13,600
	47,950
Less: Normal Profit @ 10%	
Capital employed × NRR (8% + 2%) on ₹ 1,50,000 (1,50,000 × 10%)	15,000
	32,950

Goodwill = 3 years' purchase of super profits

= 3 × 32,950

= 98,850

Illustration 6: From the following information given by Tata Telecom, calculate the value of goodwill:

(a) Average capital employed ₹ 12,00,000.

(b) Company declares 15% dividend on the shares of ₹ 20 each fully paid which is quoted in the market at ₹ 25.

(c) Net trading profit of the firm (after tax) for the past 3 years ₹ 2,15,200, ₹ 1,81,400 and ₹ 2,25,000.

You are required to compute the value of goodwill on the basis of 5 years' purchase of super profits of the business calculated on the average profit of the last three years.

Solution:

Particulars	₹
1st Year	2,15,200
2nd Year	1,81,400
3rdYear	2,25,000
	6,21,600

$$\text{Average Profit} = \frac{6,21,600}{3} = ₹\,2,07,200$$

Calculation of super profit:

Particulars	₹
Average Trading Profit	2,07,200
Less: Normal profit @ 12% on ₹ 12,00,000	1,44,000
Super Profit	**63,200**

Goodwill = 5 years' purchase of super profits

$$= 5 \times 63,200$$

$$= ₹\,3,16,000$$

Working Notes:

(1) Dividend per share = 15% of ₹ 20 = ₹ 3

(2) Rate of return on capital = $\dfrac{\text{Dividend per share (DPS)}}{\text{Market price per share (MPS)}} \times 100 = \dfrac{3}{25} \times 100 = 12\%$

Illustration 7: From the following information, ascertain the value of goodwill of Micro Computers Ltd. under super profit method.

Balance Sheet as on 31st March, 2014

Liabilities	₹	Assets	₹
Paid-up Capital (5,000 share of 100 each fully paid)	5,00,000	Goodwill at Cost	50,000
Bank Overdraft	1,16,700	Land and Building at cost	2,20,000
Sundry Creditors	1,81,000	Plant and Machinery at cost	2,00,000
Provision for Taxation	39,000	Stock in Trade	3,00,000
Profit and Loss Appropriation A/c	1,13,300	Bad Debts	1,80,000
	9,50,000		**9,50,000**

The company commenced operations in 1995 with a paid-up capital of ₹ 5,00,000. Profits for recent years (after taxation) have been as follows:

Year ended 31st March	₹
2010	40,000 (loss)
2011	88,000
2012	1,03,300
2013	1,16,000
2014	1,30,000

The loss in 2010 occurred due to a prolonged strike.

The income tax paid so far has been at the average rate of 40%. Dividends were distributed at the rate of 10% on the paid-up capital in 2011 and 2012 and at the rate of 15% in 2013 and 2014. The market price of share is ruling at ₹ 125 at the end of the year ended 31st March, 2009.

Solution: **Valuation of Goodwill of Micro Computers Ltd.**

Particulars	₹	₹
Capital Employed:		
Land and Building at Cost		2,20,000
Plant and Machinery at Cost		2,00,000
Stock in Trade		3,00,000
Sundry Debtors		1,80,000
		9,00,000
Less: Sundry Liabilities		
Bank Overdraft	1,16,700	
Sundry Creditors	1,81,000	
Provision for Taxation	39,000	3,36,700
Capital employed at the end of the year		**5,63,300**
Add back		
Dividend paid for the year	75,000	
Less: Half of the profits	65,000	10,000
Average capital employed		**5,73,300**
Rate of Return		
Average Dividends for the last 4 years at 12½% $\left(\dfrac{10 + 15 + 10 + 15}{4} \right)$		
Market price of shares on 31st March = ₹ 125		
Normal Rate of Return = $\dfrac{12.5}{125} \times 100 = 10\%$		

It may be more appropriate to relate the normal rate of return to the dividend paid in the last two years since price is related to dividend expected in future and for that, the most recent experience is relevant.

In that case, the normal rate of return will be:

$$\left(\frac{\text{Dividend per share (DPS)}}{\text{Market price per share(MPS)}} \times 100 \right) = \frac{15 \times 100}{125} = 12\%$$

Normal Profit on Average Capital employed:

at 10% on ₹ 5,73,300   57,330

at 12% on ₹ 5,73,300   68,796

Future Maintainable Profits – Weighted Average

Year	Profits ₹	Weights	Product ₹
2011	88,000	1	88,000
2012	1,03,000	2	2,06,000
2013	1,16,000	3	3,48,000
2014	1,30,000	4	5,20,000
		10	**11,62,000**

Average annual profit (after tax) = ₹ 1,16,200 FMP

Super Profits

Particulars	Normal Rate 12% (₹)	Normal Rate 10% (₹)
Average maintainable profits	1,16,200	1,16,200
Normal profit on capital employed	68,796	57,330
Super Profit	**47,404**	**58,870**
Goodwill at 5 years' purchase of Super Profits	2,37,020	2,94,350
Goodwill at 3 years' purchase	1,42,212	1,76,610

Three to five years' purchase of super profits can be taken as fair value of goodwill. Thus, depending on the assumptions regarding the normal rate of return and the number of years' purchase, goodwill may range between ₹ 1,42,212 and ₹ 2,94,350.

Illustration 8: The following is the balance sheet of HCL Ltd. as on March 31, 2015.

Liabilities		₹	Assets	₹
40,000 Equity Shares of ₹ 10 each		4,00,000	Goodwill	40,000
10% Debenture		1,20,000	Land and Banking	2,00,000
Profit & Loss Balance a on 01/04/14	40,000		Plant and Machinery	2,90,000
Add: Profit for the year before			Investment	1,00,000
providing for taxes	1,60,000	2,00,000	Stock	80,000
Sundry Creditors		80,000	Debtors	90,000
Provision for Taxation		40,000	Cash and Bank	40,000
		8,40,000		**8,40,000**

Profit includes ₹ 10,000 which is the income from investments. The present market value of the assets are:

Particulars	₹
Land and Building	2,50,000
Plant and Machinery	3,50,000
Investment	1,50,000

Current assets (book value).

Normal return on capital employed in this type of business is 10%.

Adjustment of depreciation is not required for valuation of goodwill.

Calculate the value of goodwill on the basis of 3 years' purchase of super profit of the company.

Solution: **Average Trading Capital Employed**

Particulars		₹
Land and Building		2,50,000
Plant and Machinery		3,50,000
Stock		80,000
Debtors		90,000
Cash and Bank		40,000
Less: **Current Liabilities**		**8,10,000**
Sundry Creditors	₹ 80,000	
Provision for Taxation	₹ 40,000	(1,20,000)
Capital Employed		**6,90,000**
Less: Half of current year's profit		(37,500)
Average Capital Employed		**6,52,500**

Working Notes:

The half of current year's profit is calculated as below:

Particulars	₹
Profit for the year	1,60,000
Less: Non-trading income	10,000
	1,50,000
Less: Income tax (assume 50%)	75,000
Current year's profit	**75,000**
$\dfrac{75,000}{2} = 37,500$	

$$\therefore \text{Normal Profit} = \text{Average Capital Employed} \times \frac{\text{NRR}}{100}$$

$$= 6,52,000 \times \frac{10}{100}$$

$$= 65,200$$

Super Profit = Average Profit – Normal Profit

= 75,000 – 65,200

= 9,800

$\therefore$ Goodwill = Super Profit × No. of years' purchase

= 9,800 × 3

= 29,400

Illustration 9: From the following information, calculate value of the goodwill for Reliance Ltd. by:

(i)   Super profit method.

(ii) Capitalisation method.

(a) Average capital employed in the business ₹ 6,00,000.

(b) Net trading profit of the firm for the past three years were ₹ 1,07,600, ₹ 90,700 and ₹ 1,12,500.

(c) Rate of interest expected from capital having regard to the risk involved 12%.

(d) Fair Remuneration to the firm for their services ₹ 12,000 per annum.

(e) Sundry assets of the firm ₹ 7,54,762.

(f) Sundry liabilities ₹ 31,329.

Note: Take 8 years' purchase of super profit as value of good will.

Solution:

1.   Calculation of profit:

Simple Average $= \dfrac{1,07,600 + 90,700 + 1,12,500}{3 \text{ years}}$

$= ₹ 1,03,600$

2. Calculation of future maintainable profit:

Simple average profit	1,03,600
Less: Fair Remunerations to partner	(12,000)
Future maintainable profit	**91,600**

3. Calculation of Capital Employed:
   Given = ₹ 6,00,000
4. NRR = 12% (given)
5. Number of years purchase: 8 years (given)
6. Calculation of Normal Profit:

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

$$= 6,00,000 \times \frac{12}{100}$$

$$= ₹\ 72,000$$

Super Profit $=$ FMP – Normal Profit

$$= 91,600 - 72,000$$

$$= 19,600$$

Calculation of Goodwill by purchase super profit method:

Goodwill $=$ Number of years purchase $\times$ super profit

$$= 8 \times 19,600$$

$$= ₹\ 1,56,800$$

7. Calculation of Goodwill by capitalised value of super profit method:

$$\text{Goodwill} = \frac{\text{Super Profit} \times 100}{\text{NRR}}$$

$$= \frac{19,600}{12} \times 100$$

$$= ₹\ 1,63,333$$

OR

Calculation of capitalised value of super profit method:

Goodwill $=$ Capitalised Value of FMP – Capital Employed

$$= 7,63,333 - 6,00,000$$

$$= ₹\ 1,63,333$$

Illustration 10: A company desirous of selling its business to another company has earned an average profit in past ₹ 1,50,000 per annum. It is considered that such average profit fairly represents the profit likely to be earned in the future except that:

(a) Director's fees ₹ 10,000 charged against such profit will not be payable by the purchasing company whose existing board can cope up with additional work without additional fees.

(b) Rent at ₹ 20,000 p.a. which has been paid by the existing company will not be charged in the future.

The value of the tangible assets of the existing company at the proposed date of sale was ₹ 19,00,000 and was considered that reasonable return on capital invested, for the type of company was 8%.

Calculate the value of Goodwill at 3 years' purchase of super profits.

Solution:

1. Calculation of Average Profit: ₹ 1,50,000 (Given)

2. Calculation of future maintainable profit:

Average profit	1,50,000
Add: Director's fees not required in future	10,000
Add: Rent not payable in future	20,000
Future maintainable profit	**91,600**

3. Calculation of capital employed: ₹ 19,00,000 (Given)

4. Calculation of NRR: 8% (Given)

5. Calculation of number of years' purchase: 3 years (Given)

6. Calculation of Normal Profit:

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

$$= \frac{19,00,000 \times 8}{100}$$

$$= 1,52,000$$

(i) Calculation of Super Profit:

$$\text{Super Profit} = \text{FMP} - \text{Normal Profit}$$
$$= 1,80,000 - 1,52,000$$
$$= ₹\ 28,000$$

(ii) Calculation of Goodwill by purchase of super profit method:

$$\text{Goodwill} = \text{Super profit} \times \text{Number of years' purchase}$$
$$= 28,000 \times 3$$
$$= ₹\ 84,000$$

Illustration 11: The average net profit was (before adjustment) ₹ 2,07,000. It included investment income ₹ 2,000. The cost (also present value) of investment was ₹ 50,000. Expenses amounting to ₹ 3,000 p.a. are likely to be discontinued in future. 50 paise in rupee may be taken as average annual taxation. 6% represented a fair commercial return. The average capital employed was ₹ 13,50,000 but upon valuation obtained, the actual was valued ₹ 14,50,000.

(a) Assuming seven years' purchase of super profit, what is the value of goodwill?

(b) What will be the value of goodwill under capitalisation method?

Solution:

1. Calculation of Average Profit:

Average profit (before adjustment)	2,07,000
Less: Investment income	(2,000)
Average profit (after adjustment)	**2,05,000**

2. Calculation of Future Maintainable Profit:

Average profit (before adjustment)	2,05,000
Add: Expenses likely to be discontinued in future	3,000
Future maintainable profit before tax	2,08,000
Less: Tax @ 50%	(1,04,000)
Future maintainable profit after tax	**1,04,000**

3. Calculation for Capital Employed:

As given	14,50,000
Less: Investment	(50,000)
Actual Capital Employed	**14,00,000**

4. NRR = 6% (Given)

5. Normal of years' purchase = 7 years (Given)

6. Calculation of Normal Profit:

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

$$= 14,00,000 \times \frac{6}{100}$$

$$= ₹\, 84,000$$

7. Calculation of Super Profit:

$$\text{Super profit} = 1,04,000 - 84,000$$

$$= ₹\, 20,000$$

8. Calculation of Goodwill by purchase of super profit method:

$$\text{Goodwill} = \text{No. of years} \times \text{Super Profit}$$

$$= 7 \times 20,000$$

$$= ₹\, 1,40,000$$

9. Goodwill by capitalisation of super profit:

$$\text{Goodwill} = \frac{\text{Super Profit.}}{\text{NRR}} \times 100$$

$$= \frac{20,000}{6} \times 100$$

$$= ₹\, 3,33,333$$

Illustration 12: L, M and N are partners sharing profit and losses in the ratio of 4:3:3 respectively. The firm closes its account on 31st December, every year. On 31st March, 2015, N died and it was decided to calculate the amount of the goodwill to be paid to the heirs of Mr. N. According to the partnership agreement, Goodwill was to be valued at the three year purchase of average super profits of the three years upto the death after deducting 17.5% interest on capital employed and paying a reasonable remuneration of ₹ 30,000 per annum to each partner. Average capital employed in the business was ₹ 2,00,000.

The profits of the earlier years before charging interest on capital employed were as follows:

Year	₹
2012	1,47,000
2013	1,59,000
2014	2,23,000

The profits for the year ending 31st December, 2015 were ₹ 1,31,000. Profits may be considered to have been earned uniformly for all the years including 2015. Calculate the amount of goodwill to be paid to the heirs of Mr. N.

Solution:

1.

Year	Profit	Weight	Total Product
2012	1,47,000	1	1,47,000
2013	1,59,000	2	3,18,000
2014	2,23,000	3	6,69,000
		6	**11,34,000**

2. Calculation for Average Profit:

∴ Weighted Average Profit = $\dfrac{11,34,000}{6}$ = ₹ 1,89,000

3. Calculation for FMP:

∴ Weighted Average present   1,89,000

Less: Managerial Remuneration (30,000 × 3)   (90,000)

   FMP   **99,000**

4. Calculation for Capital Employed = ₹ 2,00,000

5. Calculation of NRR = ₹ 17.5%

Calculation for Normal Profit = Capital Employed × $\dfrac{\text{NRR}}{100}$

$$= 2,00,000 \times \dfrac{17.5}{100}$$

$$= ₹ 35,000$$

6. Calculation for super profit:

Super Profit = FMP – Normal Profit

             = 99,000 – 35,000

             = 64,000

7. Calculation of Goodwill by purchase of super profit.

Goodwill = Number of years purchase × super profit

           = 3 × 64,000

           = ₹ 1,92,000

∴ Goodwill to be paid to legal heirs of N = 1,92,000 × $\dfrac{3}{10}$ = 57,600

Illustration 13: Following is the Balance sheet of A Limited as on 31st March, 2014:

Liabilities	₹	Assets	₹	₹
Share Capital		Goodwill		1,25,000
5,000 share of ₹ 100 each	5,00,000	Land and Building (at cost)	1,80,000	
Reserve Fund	1,50,000	*Less:* Depreciation	36,000	1,44,000
Workmen Compensation Fund	25,000	Plant and machinery (at cost)	2,40,000	
Workmen Profit Sharing Fund	45,000	*Less:* Depreciation	40,000	2,00,000
Profit and Loss Account	1,50,000	Investment for replacement of plant		1,00,000
Creditors	2,30,000	& machinery		
Other Liabilities	1,00,000	Books Debts	3,60,000	
		Less: R.D.D.	30,000	3,30,000
		Stock		2,00,000
		Cash at Bank		75,000
		Preliminary expense		26,000
	12,00,000			**12,00,000**

Further Information:

(i) A Ltd. had been carrying on business for the past several years. The company is to be taken over by another company and for this purpose, you are required to value Goodwill by "Capitalisation of maintainable profits method". For this purpose, following additional information is available.

  (a) The profit earned by the company for the past three years were as under:
    Year ended 31st March, 2012   ₹ 3,10,000
    Year ended 31st March, 2013   ₹ 2,73,000
    Year ended 31st March, 2014   ₹ 2,90,000
    The profits given are profits before tax, which was 50% throughout.

  (b) The new company expects to carry on business with its own board of directors, without any addition.
    The directors' fees paid by A Ltd. to its directors amounted to ₹ 9,000 per year, no more payable in future.

  (c) The new company expects a large increase in volume of business and therefore, will have to pay extra rent of ₹ 12,000 per year.

  (d) As on 31st March, 2015, land and buildings were worth ₹ 3,00,000, whereas plant and machinery were worth only ₹ 1,80,000. There is sufficient provision for doubtful debts. There is no fluctuation in the value of investment and stock.

  (e) Liability under workmen compensation fund was only ₹ 5,000.

  (f) The expected rate of return on similar business may be taken at 12%.

You are required to value Goodwill according to above instructions. All your workings should form part of your answer. (Take average capital employed, the same as closing employed for your calculations.)

Solution: Calculation of Average Profit

$$\text{Simple Average} = \frac{\text{Total profit (past year)}}{\text{Total Number of years}}$$

$$= \frac{3,10,000 + 2,73,000 + 2,90,000}{3}$$

$$= ₹\ 2,91,000$$

1. Calculation of future maintainable profit.

Particulars	₹
Simple Average Profit	2,91,000
Add: Directors' fees not required in future	9,000
Less: Extra rent payable in future	(12,000)
FMP before tax	2,88,000
Less: Tax @ 50%	(1,44,000)
FMP after tax	**1,44,000**

2. Calculation of Capital Employed:

Particulars	₹	₹
Tangible Trading Asset (at Average Value):		
Land and Building	3,00,000	
Plant and Machinery	1,80,000	
Investment	1,00,000	
Debtors	3,30,000	
Stock	2,00,000	
Cash at Bank	75,000	11,85,000
Less: External Liabilities:		
Workmen Compensation Fund	5,000	
Workmen Profit Sharing Fund	45,000	
Creditors	2,30,000	
Other Liability	1,00,000	(3,80,000)
Capital Employed		**8,05,000**

3. NRR = 12% (Given)

4. Number of years' purchase = 3 years (Given)

5. Calculation for capitalised value of FMP:

$$\text{Capitalised Value of FMP} = \frac{\text{FMP}}{\text{NRR}} \times 100$$

$$= \frac{1,44,000}{12} \times 100$$

$$= ₹\ 12,00,000$$

6. Calculation of Goodwill by capitalised of FMP Method:

   Goodwill = Capitalised value of FMP – Capital Employed

        = 12,00,000 – 8,05,000

        = ₹ 3,95,000

Illustration 14: From the following Balance sheet of Prosperous Ltd. as at 31st Dec. 2015 and further information, value goodwill at five year purchase of super profit based on average profit of last three years.

Liabilities	₹	₹	Assets	₹	₹
Share Capital:			**Fixed Assets:**		
Equity Capital	1,50,000		Goodwill	20,000	
Preference Capital	50,000	2,00,000	Machinery	2,10,000	
Reserves and Surplus:			Land and Building	1,20,000	
General Reserves	2,60,000		Furniture	60,000	

Profit and Loss Account	15,000	2,75,000	Vehicles	90,000	5,00,000
Secured Loan		1,25,000	Stocks	55,000	
Current Liabilities:			Debtors	1,00,000	
Sundry Creditors	60,000		Cash and Bank Balance	25,000	1,80,000
Bills Payable	30,000		Misc. Expenditure		20,000
Outstanding Expenses	10,000	1,00,000			
		7,00,000			**7,00,000**

(a) Profit (before tax)

For 2015	₹	1,11,000
For 2014	₹	1,05,000
For 2013	₹	99,000

(b) Machinery costing ₹ 10,000 purchased on 31st December, 2015 was wrongly charged to revenue.

(c) Normal return in similar business is 10% of the average net tangible capital employed.

(d) Machinery, land and buildings have appreciated by 10% and 20% respectively. Furniture and vehicles have depreciated by 5% and 10% respectively. Outstanding expenses were up by ₹ 3,750.

(e) Provision for tax – 50%.

(f) Ignore additional depreciation effect on revalued figures of Assets.

Solution: **Calculation of Average Profit**

Year	Profit	Weight	Product
2013	99,000	1	99,000
2014	1,05,000	2	2,10,000
2015	1,11,000 + 10,000	3	3,63,000
		6	6,72,000

1. Weighted Average Profit $= \dfrac{\text{Total of product}}{\text{Total of weight}}$

$$= \frac{6,72,000}{6}$$

$$= 1,12,000$$

2. Calculation of FMP:

Average profit before tax	1,12,000
Less: Tax @ 50%	(5,60,000)
FMP after tax	**56,000**

3. Calculation of Capital Employed:

Particulars	₹	₹
Tangible Trading Assets (at value):		
Machinery [2,10,000 + 10,000 + 22,000]	2,42,000	
Land and Building	1,44,000	
Furniture	57,000	
Vehicles	81,000	
Stock	55,000	
Debtors	1,00,000	

Cash and Bank		25,000	7,04,000
Less: Sundry Creditors		60,000	
Bills Payable		30,000	
O/s Expenses		13,750	
Secured Loan		(1,25,000)	(2,28,750)
Capital Employed			**4,75,250**

4. NRR = 10% (Given)
5. Normal years' purchase = 5 years (Given)
6. Calculation of Normal Profits:

Normal Profit $=$ Capital Employed $\times \dfrac{\text{NRR}}{100}$

$$= 4,75,250 \times \frac{10}{100}$$
$$= ₹\ 47,525$$

7. Calculation of super profits:
   Super Profit $=$ FMP – Normal Profit
   $$= 56,000 - 47,525$$
   $$= ₹\ 8,475$$

8. Calculation for Goodwill by purchased super profit method:
   Goodwill $=$ Number of years' purchase $\times$ Super Profit
   $$= 5 \times 8,475$$
   $$= ₹\ 42,375$$

Illustration 15: ALTO agreed to purchase business of A. For that purpose, goodwill is to be valued at three years' purchase of the weighted average of previous 4 years adjusted profits.

The profits for the year ending 31/12/2012 to 31/12/2015 were as under:

Year ending 2012	₹ 20,200
Year ending 2013	₹ 24,800
Year ending 2014	₹ 25,000
Year ending 2015	₹ 30,000

Following additional information is available:

(a) On 01/09/2014, major repair expenditure to plant and machinery for 6,000 was charged to revenue. That was agreed to be capitalized for goodwill, subject to 10% p.a. depreciation on diminishing balance method to be calculated.

(b) The closing stock for the year ending 31/12/2013 was overvalued by ₹ 2,400.

(c) In order to cover cost of management, an annual charge of ₹ 4,800 should be made for valuation of Goodwill.

Compute value of goodwill.

Solution:

Calculation of Trading profit:

Particulars	2012 (₹)	2013 (₹)	2014 (₹)	2015 (₹)
Profit before adjustment	20,200	24,800	25,000	30,000
Add: P/M [capital Expenses charged	–	–	6,000	–

as Revenue Express]				
Less: Depreciation 10% on above P/M				W.D.V. method
For (4 & 12 month)	–	–	(200)	(580)
				(6,000 – 200 × 10%)
Less: Closing Stock overvalued		(2,400)		
Add: Opening Stock overvalued			2,400	–
Less: Cost of Management	(4,800)	(4,800)	(4,800)	(4,800)
Adjusted Profit	**15,400**	**17,600**	**28,400**	**24,620**

Year	Profit	Weights	Product
2012	15,400	1	15,400
2013	17,600	2	35,200
2014	28,400	3	85,200
2015	24,620	4	98,480
		10	**2,34,280**

Weighted Average Profit $= \dfrac{2,34,280}{10} = ₹\, 23,428$

Calculation for Goodwill by purchase of Weighted Average method:

Goodwill = Number of years' purchase × Weighted Average Profit

= 3 × 23,428

= ₹ 70,284

Illustration 16: The balance sheet of a partnership was as follows:

Particulars	₹	₹	Particulars	₹
Capital Accounts:			Goodwill	1,000
A	50,000		Plant	70,000
B	30,000		Furniture	3,000
C	20,000	1,00,000	Stock in trade	45,000
Current Accounts:			Sundry debtors	28,000
A	8,000		Prepayments	10,000
B	7,000		Bank balance	19,000
C	10,000	25,000		
Sundry Creditors		51,000		
		1,76,000		**1,76,000**

It was proposed to form a company to acquire the business for the purpose of the acquisitions. The assets revalued as follows:

Plant of ₹ 60,000; Furniture ₹ 4,000; Stock ₹ 25,000; Pre-payment Nil. It was ascertained that the profits before charging anything in respect of the partners, for the past five years been as follow ₹ 25,000, ₹ 29,000, ₹ 33,000, ₹ 35,000 and ₹ 33,000. Included in these profits were non-recurring items, averaging ₹ 1,500. But from the nature of the business, casual non-recurring items were found to arise every year and promoters agreed that a figure of ₹ 1,200 should be allowed as profit from this source.

Similar business paid a dividend of 8% p.a. on their ordinary share and partners who would be directors of the company were worth remuneration of: A – ₹ 4,000; B – ₹ 5,000 and C – ₹ 6,000 p.a.

Five years' purchase of the adjusted super profits on annuity basis was the agreed price for goodwill; the super profit being taken on the value of the goodwill. Ignore taxation. Annuity rate for Re. 1 @ 8% is 3.75.

Solution:

1. Calculation of average profit:

$$\text{Simple Average} = \frac{25{,}000 + 29{,}000 + 33{,}000 + 35{,}000 + 33{,}000}{5}$$

=	31,000
Less: Non-recurring items [1,500 – 1,200]	300
Average Profit	**30,700**

2. Calculation of FMP:

Average profit before tax	30,700
Less: Managerial Remuneration (4,000 + 5,000 + 6,000)	(15,000)
FMP	**15,700**

3. Calculation of capital Employed:

Particulars	₹	₹
Tangible Trading Assets:		
Plant	60,000	
Furniture	4,000	
Stock	42,000	
Debtors	25,000	
Pre-payments	Nil	
Bank	19,000	1,50,000
Less: External Liabilities:		
Sundry Creditors		(51,000)
Capital Employed		**99,000**

4. Calculation of NRR = 8%

5. Number of years' purchase = 5 years

6. Calculation of Normal Profit:

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

$$= 99{,}000 \times \frac{8}{100}$$

$$= ₹ \, 7{,}920$$

7. Calculation of Super Profit:

$$\begin{aligned}\text{Super Profit} &= \text{FMP} - \text{Normal Profit} \\ &= 15{,}700 - 7{,}920 \\ &= ₹ \, 7{,}780\end{aligned}$$

8. Calculation of Goodwill by purchase of super profit method:

$$\begin{aligned}\text{Goodwill} &= \text{Normal of years' purchase} \times \text{Super Profit} \\ &= 5 \times 7{,}780 \\ &= ₹ \, 38{,}900\end{aligned}$$

9. Calculation of Goodwill by Annuity method of Super Profit:

Goodwill = Annuity Rate × Super Profit

= 3.75 × 7,780

Goodwill = ₹ 29,175

Illustration 17: From the following information supplied to you, ascertain the value of Goodwill of Anamika Ltd. which is carrying business as retail trader under the capitalisation of profit method.

Balance sheet as on March 31, 2015

Particulars	₹	Particulars	₹
Paid-up Capital		Goodwill at cost	50,000
5,000 Equity Shares of ₹ 100 each fully paid	5,00,000	Land and Buildings at cost	2,20,000
Profit and Loss Appropriation A/c	1,13,300	Plant and Machinery cost	2,00,000
Bank Overdraft	1,16,700	Stock in Trade	3,00,000
Provision for Taxation	39,000	Book Debt (–) Provisions for bad debts	1,80,000
Sundry Creditors	1,81,000		
	9,50,000		**9,50,000**

The company commenced operations in 1985 with a paid-up capital of ₹ 5,00,000. Profit for recent years (after taxation) have been as follows:

Year ending March, 31	₹
2011	(Loss) 40,000
2012	88,000
2013	1,03,000
2014	1,16,000
2015	1,30,000

(a) The loss in 2011 occurred due to prolonged strike.

(b) The income tax paid so far has been at the average rate of 40%, but it is likely to be 50% now onwards.

(c) Dividend were distributed at the rate of 10% at the end of the year ending March 31, 2015.

(d) The market price of shares is ruling at ₹ 125 at the end of the year ending March, 31, 2015.

(e) Profit till 2015 had been ascertained after debiting ₹ 40,000 as remuneration to the managing director. The Government has approved a remuneration of ₹ 60,000 with effect from April 1, 2015.

(f) The company has been able to secure a contract for supply of materials at advantageous prices. The advantage has been valued at ₹ 40,000 p.a. for the next five years.

Solution:

1. Calculation for Average Profit:

Note: Loss in the years 2014 is to be ignored because it was due to prolonged strike which is a abnormal event in the normal course of business. We are excluding profit of the years 2012 also because impact of the strike was there in that year also.

	2013	2014	2015
Profit before tax =	$\dfrac{1,03,000}{60\%} = 1,71,667$	$\dfrac{1,16,000}{60\%} = 1,93,333$	$\dfrac{1,30,000}{60\%} = 2,16,667$

2. Calculation for Weighted Average Profit:

Year	Profit	Weights	Product
2013	1,71,667	1	1,71,667
2014	1,93,333	2	3,86,666
2015	2,16,667	3	6,50,001
		6	**12,08,334**

Weighted Average Profit $= \dfrac{12,08,334}{6} = ₹\,2,01,389$

3. Calculation for FMP:

Weighted Average Profit	2,01,389
Less: Extra director's fees in future	(20,000)
Add: Profit likely to be earned in future	40,000
FMP before tax	2,21,389
Less: Tax at 50%	1,10,694
FMP after tax	**1,10,695**

4. Calculation for Capital Employed:

Particulars	₹	₹
Tangible Trading Assets:		
Land & Building	2,20,000	
Plant & Machinery	2,00,000	
Stock	3,00,000	
Debtors	1,80,000	9,00,000
Less: External Liabilities:		
Bank	1,16,700	
Provision for Tax	39,000	
Creditors	1,81,000	(3,36,700)
Capital Employed		**5,63,300**

5. Calculation for NRR:

$$NRR = \dfrac{\text{Dividend Per Share}}{\text{Market Price Per Share}} \times 100$$

$$= \dfrac{10}{125} \times 100$$

$$= 8\%$$

6. Calculation of Normal Profit:

$$\text{Normal Profit} = \text{Capital Employed} \times \dfrac{NRR}{100}$$

$$= 5,63,300 \times \dfrac{8}{100}$$

$$= ₹\,45,064$$

7. Calculation of Super Profit:

$$\begin{aligned}
\text{Super Profit} &= \text{FMP} - \text{Normal Profit}\\
&= 1,10,695 - 45,064\\
&= ₹\,65,631
\end{aligned}$$

8. Calculation of Goodwill by capitalisation of super profit method:

$$\text{Goodwill} = \dfrac{\text{Super Profit}}{NRR} \times 100$$

$$= \frac{65,631}{8\%}$$

$$= ₹ \ 8,20,387$$

Valuation of Shares

In the case of shares quoted in the recognised Stock Exchanges, the prices quoted in the Stock Exchanges are generally taken as the basis of valuation of those shares. However, the Stock Exchange prices are determined generally on the demand supply position of the shares and on business cycle. The London Stock Exchange opines that the Stock Exchange may be linked to a scientific recording instrument which registers not its own actions and options but the actions and options of private institutional investors all over the country/world. These actions and options are the result of fear, guess work, intelligent or otherwise, good or bad investment policy and many other consideration. The quotations what result definitely do not represent valuation of a company by reference to its assets and its earning potential. Therefore, the accountants are called upon to value the shares by following the other methods.

The value of share of a company depends on so many factors such as:

1. Nature of business.
2. Economic policies of the government.
3. Demand and supply of shares.
4. Rate of dividend paid.
5. Yield of other related shares in the stock exchange, etc.
6. Net worth of the company.
7. Earning capacity.
8. Quoted price of the shares in the stock market.
9. Profits made over a number of years.
10. Dividend paid on the shares over a number of years.
11. Prospects of growth, enhanced earning per share, etc.

Need and Purpose of Valuation of Shares

The need for valuation of shares may be felt by any company in the following circumstances:

1. For assessment of Wealth Tax, Estate Duty, Gift Tax, etc.
2. Amalgamations, Absorptions etc.
3. For converting one class of shares to another class.
4. Advancing loans on the security of shares.
5. Compensating the shareholders on acquisition of shares by the Government under a scheme of nationalisation.
6. Acquisition of interest of dissenting shareholder under the reconstruction scheme, etc.

Factors Influencing Valuation

The valuation of shares of a company is based, *inter alia*, on the following factors:

1. Current stock market price of the shares.
2. Profits earned and dividend paid over the years.
3. Availability of reserves and future prospects of the company.

4. Realizable value of the net assets of the company.

5. Current and deferred liabilities for the company.

6. Age and status of plant and machinery of the company.

7. Net worth.of the company.

8. Record of efficiency, integrity and honesty of Board of Directors and other managerial personnel of the company.

9. Quality of top and middle management of the company and their professional competence.

10. Record of performance of the company in financial terms.

Methods of Valuation of Shares

Certain methods have come to be recognised for valuation of shares of a company, *viz.*, (1) Open market price; (2) Stock exchange quotation; (3) Net assets basis; (4) Earning per share method; (5) Yield or return method; (6) Net worth method; (7) Break-up value etc.

IDEAL VALUATION METHOD

The various methods of valuation of shares of a company as mentioned above have their individual merits and demerits. Therefore, it has been universally recognised that while valuing the shares of a company, it is advisable not to depend upon any single method but to resort to a combination of three well recognized methods, *viz.*, market value method, yield or return on investment method and net assets value method for arriving at a fair and reasonable shares exchange ratio. While doing this, due weightage should be given to each method based on the company's performance and future prospects.

INTRINSIC VALUE METHOD

This method is also called as Assets backing method, Real value method, Balance Sheet method or Break-up value methods. Under this method, the net assets of the company including goodwill and non-trading assets are divided by the number of shares issued to arrive at the value of each share.

If the market value of the assets is available, the same is to be considered and in the absence of such information, the book values of the assets shall be taken as the market value. While arriving at the net assets, the fictitious assets such as preliminary expenses, the debit balance in the Profit and Loss A/c should not be considered. The liabilities payable to the third parties and to the preference shareholders is to be deducted from the total asset to arrive at the net assets. The funds relating to equity shareholders such as General Reserve, Profit and Loss Account, Balance of Debenture Redemption Fund, Dividend Equalisation Reserve, Contingency Reserve, etc. should not be deducted.

Illustration 18: From the information given below and the balance sheet of Cipla Limited on 31st December, 2015, find the value of share by Intrinsic value method.

Balance Sheet

Particulars	₹	Particulars	₹
1000, 8% Preferential Shares of 100 each fully paid	1,00,000	Buildings	70,000
4,000 Equity shares of ₹ 100 fully paid	4,00,000	Furniture	3,000
Reserves	1,50,000	Stock (Market value)	4,50,000
Profit and Loss Account	5,10,000	Investment at cost (Face value ₹ 4,00,000)	3,35,000
Creditors	48,000	Debtors	2,80,000

		Bank	60,000
		Preliminary Expenditure	10,000
	12,08,000		**12,08,000**

Building is now worth of ₹ 3,50,000 and the Preferential shareholders are having preference as to capital.

Solution: **Valuation of Equity Share (Intrinsic Value Method)**

Particulars	₹
Building	3,50,000
Furniture	3,000
Stock	4,50,000
Investment	3,35,000
Debtors	2,80,000
Bank	60,000
Total Assets	14,78,000
Less: Creditors	(48,000)
Net Assets	14,30,000
Less: Preference Share Capital	(1,00,000)
Assets Available for equity shareholders	**13,30,000**

$$\text{Value of Equity Share} = \frac{\text{Net Assets Available to Equity Shareholders}}{\text{No. of Equity Shares}}$$

$$= \frac{13,30,000}{4,000}$$

$$= ₹\ 332.5$$

∴ Intrinsic value of each equity shares = ₹ 332.50

Yield Method

The valuation of shares under the Yield method may be done under two categories:

(a) **Return on Capital Employed Method:** This methods is applied for the purpose of valuation of the shares of majority shareholding. A big investor is more interested in what the company earns and not simply in what the company distributes. Even if the company does not distribute 100% of its earning among its shareholders, it, as a matter of fact, strengthens the financial position of the company. The value of the share under this method is calculated by the formula.

$$\frac{\text{Return of Capital Employed}}{\text{Normal Rate of Return}} \times \text{Paid - up value of shares}$$

(b) **Valuation on the Basis of Dividend:** This method is more suitable for valuation of small block of shares. The method of calculation is:

$$\frac{\text{Expected Rate of Dividend}}{\text{Normal Rate of Dividend}} \times \text{Paid - up value of shares}$$

NORMAL RATE OF DIVIDEND

Illustration 19: The following particulars are available in respect of Goodluck Limited.

(a) Capital 450, 6% preference shares of ₹ 100 each fully paid and 4,500 equity shares ₹ 10 each fully paid.

(b) External liabilities: ₹ 7,500.

(c) Reserves and Surplus: ₹ 35,000.

(d) The average expected profit (after taxation) earned by the company ₹ 8,500.

(e) The normal profit earned on the market value of equity shares (full paid) of the same type of companies is 9%.

(f) 10% of the profit after tax is transferred to reserves.

Calculate the intrinsic value per equity share and value per equity share according to dividend yield basis.

Assume that out of total assets, assets worth of ₹ 350 are fictitious.

Solution:

Intrinsic Value of Shares

Particulars		₹
6% Preference Share Capital (450 × 10)		45,000
Equity Shares (4,500 × 10)		45,000
Reserves and Surplus		3,500
External Liabilities		7,500
Total Liabilities		**1,01,000**
As Total Liabilities = Total Assets,		
Total Assets		1,01,000
Less: Fictitious Assets	(350)	
External Liabilities	(7,500)	
Preference Shares	(45,000)	52,850
Net Assets Available for Equity Shareholders		**48,150**

$$\therefore \text{Intrinsic Value of Share} = \frac{\text{Net Assets Available for Equity Shareholders}}{\text{Number of Equity Shares}}$$

$$= \frac{48,150}{4,500}$$

Yield Basic $= 10.70$

Profit Available to Equity Shareholders

Particulars	₹
Average Profit after Taxation	8,500
Transfer to General Reserves (10%)	(850)
	7,650
Less: Preference Dividend (60% of 45,000)	2,700
Profit Available to Equity Shareholders	**(4,950)**

$$\text{Rate of dividend} = \frac{4,950}{45,000} \times 10$$

$$= 11\%$$

$$\therefore \text{Value of Equity Share} = \frac{\text{Rate of Dividend}}{\text{Normal Rate}} \times \text{Paid} - \text{up Value of Share}$$

$$= \frac{11}{9} \times 10$$

$$= ₹ 12.22$$

Illustration 20: The capital structure of company as on 31st March, 2015 was as under:

Equity Share Capital	5,00,000
11% Preference Share Capital	3,00,000
12% Secured Debentures	4,00,000
Reserves	3,00,000

The company on an average earns a profit of ₹ 4,00,000 annually before deduction of interest on Debentures and Income Tax, which works out to 45%. The normal return on equity shares on companies similarly placed is 15% provided.

(a) The profit after tax covered the fixed interest and fixed dividends at least four times.

(b) Equity capital and reserves are 150% of debentures and preference capital.

(c) Yield on shares is calculated at 60% of profits distributed and 5% on undistributed profits.

The company is regularly paying an equity dividend of 18%. Ascertain the value of equity share of the company.

Solution:

Particulars	₹
Average Profit of the companies before Interest and Tax	4,00,000
Less: Debenture interest (12% of 4,00,000)	48,000
Profit after interest but before tax	3,52,000
Less: Tax @ 45%	1,58,400
Profit after Interest and Tax	**1,93,600**

Evaluation of Conditions given in the question:

(a) Profit after tax whether covers fixed interest and fixed dividend at least four times. Profit after tax.

= 4,00,000 – 1,58,400 = 2,41,600 Fixed interest and fixed dividend interest.

Interest	48,000
Fixed dividend 11% of 3,00,000	33,000
	81,000

$$= \frac{2,41,600}{81,000}$$

= 2.9827 times

∴ Fixed interest and dividend coverage is 2.98 times only and is less than the prescribed 4 times.

(b) Whether equity capital and reserves are of 150% of preference share capital and debentures.

Particulars	₹	Particulars	₹
Equity share	5,00,000	Preference share	3,00,000
Reserves	3,00,000	Debentures	4,00,000
	8,00,000		**7,00,000**

$$\therefore \text{Ratio} = \frac{8,00,000}{7,00,000} \times 100 = 114.28\%$$

∴ Ratio is less than the Prescribed Ratio of 150%.