CHAPTER 13

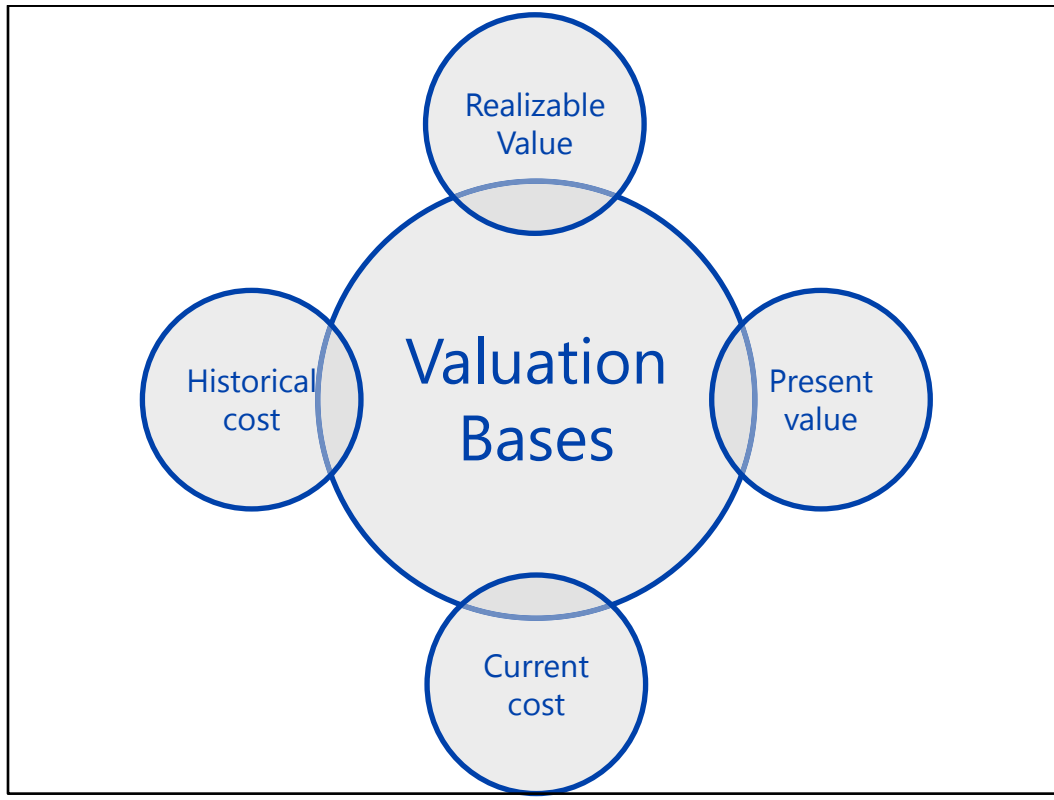
VALUATION OF GOODWILL

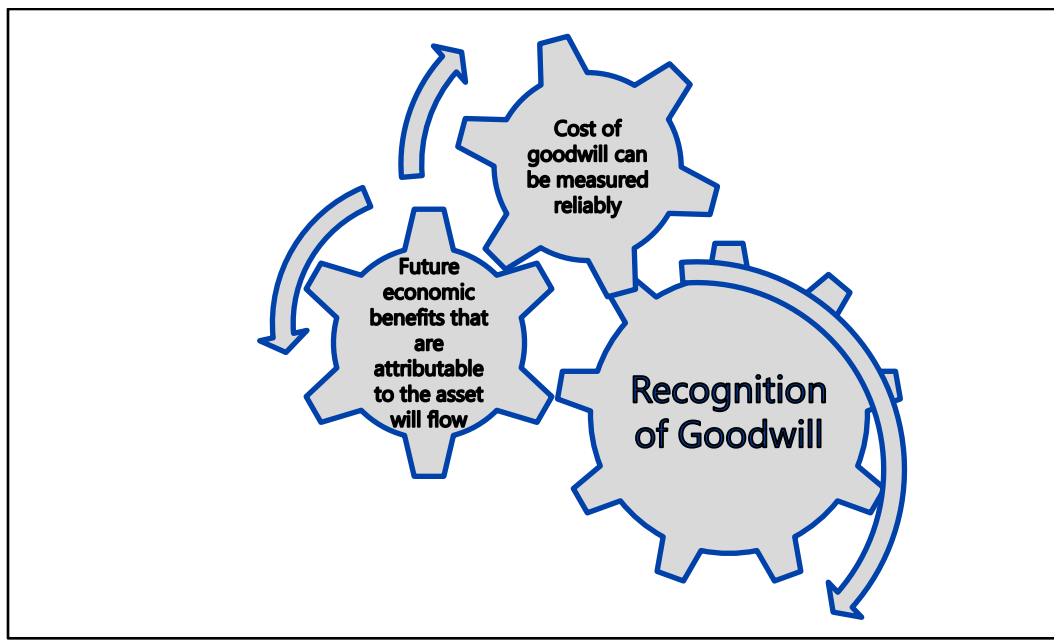
LEARNING OUTCOMES

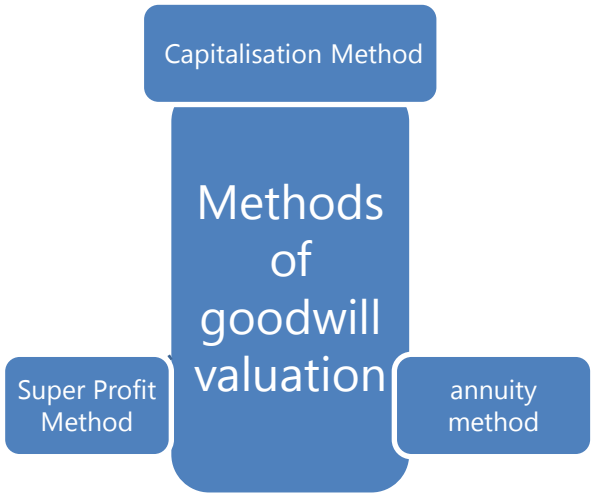
After studying this chapter, you will be able to:

- Understand the concept and significance of valuation.
- Familiarize with the bases of valuation.
- Learn the terminology of valuation models.
- Understand the implications of valuation of goodwill.
- Familiarize with the valuation approaches adopted for valuation of goodwill.
- Compute Future Maintainable profit, Capital employed and goodwill.

CHAPTER OVERVIEW







1 INTRODUCTION

Valuation is the process of estimating what something is worth. Valuation can be used as a very effective business tool by management for better decision making throughout the life of the enterprise. Valuations are needed for many reasons such as investment analysis, capital budgeting, merger and acquisition transactions, financial reporting, determination of tax liability.

Companies are governed and valuations are influenced by the market supply-demand life cycles along with product and technology supply-demand lifecycles. Correspondingly, the value of an enterprise over the course of its life peaks with the market and product technology factors. Both financial investors such as venture capitalists and entrepreneurs involved in a venture would ideally like to exit the venture in some form near the peak to maximize their return on investment. Thus, valuation helps determine the exit value of an enterprise at that peak. This exit value typically includes the tangible and intangible value of the company's assets. Tangible value would typically include balance sheet items recorded as the book value of the enterprise. Intangibles would typically include intellectual property, human capital, brand and customers, and others. In more traditional companies considering the private equity markets, the value of intangibles is much higher than the value of the tangible assets. Therefore, an effective enterprise valuation methodology needs to be developed.

One can also define valuation as Measurement of value in monetary terms. Measurement of income and valuation of wealth are two interdependent core aspects of financial accounting and reporting. Wealth comprises of assets and

liabilities. Valuation of assets and liabilities are made to portray the wealth position of a firm through a balance sheet and to supply logistics to the measure of the periodical income of the firm through a profit and loss account.

Again valuation of business and valuation of share are made through financial statement analysis for management appraisal and investment decisions. Valuation is pivotal in strategic, long term or short term decision making process in cases like reorganization of company, merger and acquisition, extension or diversification, or for launching new schemes or projects. As the application area of valuation moves from financial accounting to financial management, the role of accountant also undergoes a transition. That order of transition in the concept and use of valuation process is followed in the subsequent units of this chapter.

2 CONCEPT OF VALUATION

Valuation means measurement of an item in monetary term. The subjects of valuation are varied as stated below:

- Valuation of Tangible Fixed Assets
- Valuation of Intangibles including brand valuation and valuation of goodwill
- Valuation of Shares
- Valuation of Business

The objectives of valuation are again different in different areas of application in financial accounting and in financial management.

3 NEED FOR VALUATION

Financial statements must give a "true and fair view" of the state of affairs of a company as per provisions of the Companies Act. Proper valuation of all assets and liabilities is required to ensure true and fair financial position of the business entity. In other words, all matters which affect the financial position of the business have to be disclosed. Under or overvaluation of assets may not only affect the operating results and financial position of the current period but will also affect these for the next accounting period. The present unit deals with different principles involved in the valuation of different types of assets.

Assets can be classified as (i) Non- current assets and (ii) Current assets. Non-current assets have been further sub-classified into (a) fixed assets i.e. tangible assets, intangible assets, capital W.I.P. and intangible assets under development (b) non-current investments (c) deferred tax assets (Net) (d) long term loans and advances

and (e) other non-current assets. Current assets have been further sub-classified into (a) Current Investments (b) Inventories (c) Trade Receivables (d) Cash and Cash Equivalents (e) Short Term Loans and Advances and (f) Other Current Assets.

The students are expected to learn the essence and modalities of valuation, a core function in financial accounting. Valuation is done sometimes by the Valuers/Engineers in cases where technical inputs and knowledge is required to arrive at the Fair value and accepted by various Government and Statutory Authorities. Students should be familiar with these valuation Reports and their basis of valuation.

Different approaches to valuation of different kinds of assets and liabilities in different perspectives have pushed the role of accountant to a complex position. This chapter is aimed to differentiate the objectives, approaches and methods of valuation in order to integrate them in a comprehensive logical frame.

4 BASES OF VALUATION

A number of different measurement bases are employed to different degrees and in varying combinations in valuation of different assets in different areas of application. They include the following:

(a) Historical cost. Assets are recorded at the amount of cash or cash equivalents paid or the fair value of the other consideration given to acquire them at the time of their acquisition.

(b) Current cost. Assets are carried at the amount of cash or cash equivalents that would have to be paid if the same or an equivalent asset were acquired currently.

(c) Realizable (settlement) value. Assets are carried at the amount of cash or cash equivalents that could currently be obtained by selling the asset in an orderly disposal.

(d) Present value. Assets are carried at the present value of the future net cash inflows that the item is expected to generate in the normal course of business.

Other generally used valuation bases are as follows:

Net Realizable Value (NRV): This is same as the Realizable (settlement) value. This is the value (net of expenses) that can be realized by disposing off the assets in an orderly manner. Net selling price or exit values also convey the same meaning.

Economic value: This is same as the present value. The other name of it is value to business.

Replacement (cost) value: This is also same as the current cost.

Recoverable (amount) value: This is the higher of the net selling price and value in use.

Deprival value: This is the lower of the replacement value and recoverable (amount) value.

Liquidation value: This is the value (net of expenses), that a business can expect to realize by disposing of the assets in the event of liquidation. Such a value is usually lower than the NRV or exit value. This is also called break-up value.

Fair value: This is not based on a particular method of valuation. It is the acceptable value based on appropriate method of valuation in context of the situation of valuation. Thus fair value may represent current cost, NRV or present value as the case may be.

In financial accounting 'An asset is recognised in the balance sheet when it is probable that the future economic benefits associated with it will flow to the enterprise and the asset has a cost or value that can be measured reliably.' 'The measurement basis most commonly adopted by enterprises in preparing their financial statements is historical cost. This is usually combined with other measurement bases.

The requirements of regulations and accounting standards as to recognition of assets, reliability of measurement and disclosure in financial reports have set certain limitations to the freedom of valuation so far as financial accounting is concerned.

5 TYPES OF VALUE

The following are six types of value:

- Going-concern value is the value of a firm as an operating business.
- Liquidation value is the projected price that a firm would receive by selling its assets if it were going out of business.
- Book value is the value of an asset as carried on a balance sheet. In other words, it means (i) the cost of an asset minus accumulated depreciation (ii) the net asset value of a company, calculated by total assets minus intangible assets (patents, goodwill) and liabilities (iii) the initial outlay for an investment. This number may be net or gross of expenses such as trading

costs, sales taxes, service charges and so on. It is the total value of the company's assets that shareholders would theoretically receive if a company were liquidated. By being compared to the company's market value, the book value can indicate whether a Inventory is under or overpriced. In personal finance, the book value of an investment is the price paid for a security or debt investment. When an inventory is sold, the selling price less the book value is the capital gain (or loss) from the investment.

- Market value is the price at which buyers and sellers trade similar items in an open market place. It is the current quoted price at which investors buy or sell a share of common Inventory or a bond at a given time. The market capitalization plus the market value of debt, sometimes referred to as "total market value". In the context of securities, market value is often different from book value because the market takes into account future growth potential.
- Fair market value is the price that a given property or asset would fetch in the market place, subject to the following conditions: (i) Prospective buyers and sellers are reasonably knowledgeable about the asset; they are behaving in their own best interests and are free of undue pressure to trade. (ii) A reasonable time period is given for the transaction to be completed. Given these conditions, an asset's fair market value should represent an accurate valuation or assessment of its worth. Fair market values are widely used across many areas of commerce. For example, municipal property taxes are often assessed based on the fair market value of the owner's property. Depending upon how many years the owner has owned the home, the difference between the purchase price and the residence's fair market value can be substantial. Fair market values are often used in the insurance industry as well. For example, when an insurance claim is made as a result of a car accident, the insurance company covering the damage to the owner's vehicle will usually cover damages up to the fair market value of the automobile.
- Intrinsic value is the value at which an asset should sell based on applying data inputs to a valuation theory or model. The actual value of a company or an asset based on an underlying perception of its true value including all aspects of the business, in terms of both tangible and intangible factors. This value may or may not be the same as the current market value. Value investors use a variety of analytical techniques in order to estimate the intrinsic value of securities in hopes of finding investments where the true value of the investment exceeds its current market value. For call options, this is the difference between the underlying Inventory's price and the strike price. For put options, it is the

difference between the strike price and the underlying Inventory's price. In the cases, if the respective difference value is negative, the intrinsic value is given as zero. For example, value investors that follow fundamental analysis look at both qualitative (business model, governance, target market factors etc.) and quantitative (ratios, financial statement analysis, etc.) aspects of a business to see if the business is currently out of favour with the market or is really worth much more than its current valuation.

- Extrinsic value is another variety. It is the difference between an option's price and the intrinsic value. For example, an option that has a premium price of ₹ 10 and an intrinsic value of ₹ 5 would have an extrinsic value of ₹ 5. Denoting the amount that the option's price is greater than the intrinsic value, the extrinsic or time value of the option declines as the expiration date of an option draws closer.

These types of values can differ from one another. For example, a firm's going-concern value is likely to be higher than its liquidation value. The excess of going-concern value over liquidation value represents the value of the operating firm as distinct from the value of its assets. Book value can differ substantially from market value. For example, a piece of equipment appears on a firm's books at cost when purchased but decreases each year due to depreciation charges. The price that someone is willing to pay for the asset in the market may have little relationship with its book value. Market value reflects what someone is willing to pay for an asset whereas intrinsic value shows what the person should be willing to pay for the same asset.

6 APPROACHES OF VALUATION

Three generally accepted approaches to valuation are as follows:

(1) Cost Approach: e.g. Adjusted Book Value

(2) Market Approach: e.g. Comparables

(3) Income Approach: e.g. Discounted Cash Flow

Each approach has advantages and disadvantages. Generally there is no "right" answer to a valuation problem. Valuation is very much an art as much as a science! These approaches can be briefly discussed as:

Cost Approach

This technique involves restating the value of individual assets to reflect their fair market values. It is useful for valuing holding companies where assets are easy to

value (for example, securities) and less useful for valuing operating businesses. The value of an operating company is generally greater than that of its assets. The difference between that value of the expected cash flows and that of its assets is called the "going concern value". It is a useful approach when the purpose of the valuation is that the business will be liquidated and Trade payables must be satisfied. While doing this valuation following adjustments to book value can be made:

- Inventory undervaluation
- Bad debt reserves
- Market value of plant and equipment
- Patents and franchises
- Investments in affiliates
- Tax-loss carried forward

Market Approach: The market approach, as the name implies, relies on signs from the real market place to determine what a business is worth. It is to be understood that business does not operate in vacuum. If what one does is really great, then chances of others doing the same or similar things are more. If one is looking to buy a business, one decides what type of business he is interested in and then looks around to see what the "going rate" is for businesses of this type. If one is planning to sell business, he will check the market to see what similar businesses sell for. So the market approach to valuing a business is a great way to determine its fair market value - a monetary value likely to be exchanged in an arms-length transaction, when the buyer and seller act in their best interest.

Income approach

The income approach considers the core reason for running a business ie. making money. Here the so-called economic principle of expectation applies. Since the business value must be established in the present, the expected income and risk must be translated to today. The income approach generally uses two ways to do this translation: (i) Capitalization and (ii) Discounting.

7 DEFINITION OF INTANGIBLES

An intangible asset is an identifiable non-monetary asset, without physical substance, held for use in the production or supply of goods or services, for rental to others, or for administrative purposes (as per AS 26 "Intangible Assets"). It is important to note that Intangible assets are the major contributors for the

disparity between company value according to accounting records and company value as per market capitalization. Therefore, understanding the concept of an intangible asset from the angle of an accountant is necessary. Enterprises usually expend resources, or incur liabilities, on the acquisition, development, maintenance or enhancement of intangible resources such as scientific or technical knowledge, design and implementation of new processes or systems, licences, intellectual property, market knowledge and trademarks (including branch names and publishing titles) at regular intervals of time. Common examples of items encompassed by these broad headings are computer software, patents, copyrights, motion picture films, customer lists, mortgage servicing rights, finishing licences, import quotas, franchises, customer or supplier relationships, customer loyalty, market share and marketing rights. Goodwill is another example of an item of intangible nature which either arises on acquisition or is internally generated. Intangible fixed assets can be classified as identifiable intangibles and not identifiable intangibles. The identifiable intangibles include patents, trademarks and designs and brands whereas the not identifiable intangibles are clubbed together as goodwill. To be identifiable, it is necessary that the intangible asset is clearly distinguished from goodwill. An intangible asset can be clearly distinguished from goodwill if the asset is separable.

8 RECOGNITION

AS 26 "Intangible Assets" establishes general principles for the recognition and measurement of Intangible Assets. An intangible asset should be recognised in the financial statements if, and only if:

(a) It is probable that the future economic benefits that are attributable to the asset will flow to the enterprise; and

(b) The cost of the asset can be measured reliably.

These recognition criteria apply to both costs incurred to acquire an intangible asset and those incurred to generate an asset internally. The Standard imposes additional criteria, however, for the recognition of internally-generated intangible assets. **if an intangible asset is acquired separately**:

Cost of the intangible asset can usually be measured reliably and such intangible asset is recognized and valued at cost in the same manner as in case if the tangible fixed assets.

If the intangible asset is internally generated:

The standards prohibit the recognition of internally generated goodwill as an

asset. Brands, Mastheads, Publishing titles, Customer Lists etc. are all internally generated assets. However, when such assets are purchased either individually or as part of an amalgamation in the nature of a purchase, they may meet the general recognition criteria for intangible assets and, therefore, potentially may be recognized. This difference means that intangible assets such as brands can be capitalized if acquired, but will be expensed if they are generated internally.

The Standard distinguishes between two phases in the generation of an intangible asset internally, namely, the research phase and the development phase. Capitalization is only permitted during the development phase.

Research is defined as original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and understanding.

Development is the application of research findings or other knowledge to a plan or design for the production of new or substantially improved materials, devices, products, processes, systems or services prior to the commencement of commercial production or use.

If it is not possible to distinguish the research phase from the development phase of an internal project to create an intangible asset, the expenditure on that project is treated as relating only to the research phase.

Subsequent expenditure on an intangible asset after its purchase or its completion should be added to the cost of the intangible asset if:

(a) It is probable that the expenditure will enable the asset to generate future economic benefits in excess of its originally assessed standard of performance; and

(b) the expenditure can be measured and attributed to the asset reliably.

Designs which are acquired separately, valuation would be made at initial cost of acquisition (with subsequent addition to cost, if any). If they are generated internally and are not recognized then no valuation shall be made. However for internally generated recognized, valuation would be made at cost (with subsequent addition to cost, if any).

The depreciable amount of an intangible asset should be allocated on a systematic basis over the best estimate of its useful life. There is a rebuttable presumption that the useful life of an intangible asset will not exceed ten years from the date when the asset is available for use. Amortisation should commence when the asset is available for use.

9 GOODWILL

Goodwill is said to be that element arising from 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 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 risk involved, fair management remuneration and other relevant circumstances.

Goodwill of a business may arise in two ways. It may be inherent to the business that is generated internally or it may be acquired while purchasing any concern. Purchased goodwill can be defined as being the excess of fair value of the purchase consideration over the fair value of the separable net assets acquired. The value of purchased goodwill is not necessarily equal to the inherent goodwill of the business acquired as the purchase price may reflect the future prospects of the entity as a whole.

Goodwill in financial statements arises when a company is purchased for more than the fair value of the identifiable net assets of the company. The difference between the purchase price and the sum of the fair value of the net assets is by definition the value of the "goodwill" of the purchased company. The acquiring company must recognize goodwill as an asset in its financial statements and present it as a separate line item on the balance sheet, according to the current purchase accounting method. In this sense, goodwill serves as the balancing sum that allows one firm to provide accounting information regarding its purchase of another firm for a price substantially different from its book value. Goodwill can be negative, arising where the net assets at the date of acquisition, fairly valued, exceed the cost of acquisition. Negative goodwill is recognized as a gain to the extent that it exceeds allocations to certain assets. Under current accounting standards, it is no longer recognized as an extraordinary item. For example, a software company may have net assets (consisting primarily of miscellaneous equipment, and assuming no debt) valued at ₹ 1 million, but the company's overall value (including brand, customers, intellectual capital) is valued at ₹ 10 million. Anybody buying that company would book ₹ 10 million in total assets acquired, comprising ₹ 1 million physical assets, and ₹ 9 million in goodwill.

10 VALUATION OF GOODWILL

There are basically two accounting methods for goodwill valuation. These are:

(i) Capitalisation Method and (ii) Super Profit Method. A third method called annuity method is a refinement of the super profit method of goodwill valuation.

10.1 Capitalisation method

Under this method future maintainable profit is capitalised applying normal rate of return to arrive at the normal capital employed. Goodwill is taken as the excess of normal capital employed over the actual capital employed.

$$\text{Normal Capital employed} = \frac{\text{Future maintainable profit}}{\text{Normal rate of return}}$$

Goodwill = Normal Capital Employed – Actual Closing Capital Employed

Factors considered in this method are:

(i) Future maintainable profit;

(ii) Actual capital employed in the business enterprise for which goodwill is to be computed;

(iii) Normal rate of return in the industry to which the business enterprise belongs.

For example, Capital employed in X Ltd. is ₹ 17,00,000, future maintainable profit is ₹ 3,00,000 and normal rate of return is 15%.

$$\text{So goodwill} = \frac{₹\ 3,00,000}{0.15} - ₹\ 17,00,000 = ₹\ 3,00,000$$

Naturally, if normal capital employed becomes less than actual capital employed there arises *negative goodwill*.

It is to be noted that under Capitalisation method the actual capital employed is to be taken at (closing) balance sheet date.

10.2 Super profit method

Excess of future maintainable profit over normally expected profit is called super profit. Under this method goodwill is taken as the aggregate super profit of the future years for which such super profit is expected to be maintained.

Factors considered in this method are:

(i) Future maintainable profit;

(ii) Actual capital employed;

(iii) Normal rate of return;

(iv) Period for which super profit is projected.

Super profit = Future maintainable profit minus (Actual Capital employed × Normal rate of return)

Goodwill = Super profit × No. of years for which Super Profit can be maintained.

10.3 Annuity method

It is a refinement of the super profit method. Since super profit is expected to arise at different future time periods, it is not logical to simply multiply super profit into number of years for which that super profit is expected to be maintained. Further future values of super profits should be discounted using appropriate discount factor. The annuity method got the nomenclature because of suitability to use annuity table in the discounting process of the uniform super profit. In other words, when uniform annual super profit is expected, annuity factor can be used for discounting the future values for converting into the present value. Here in addition to the factors considered in super profit method, appropriate discount rate is to be chosen for discounting the cash flows.

Example

Super Profit of X Ltd. ₹ 95,000 p.a. can be maintained for 5 years. Discount rate is 15%.

Goodwill = ₹ 95,000 × 3.352 = ₹ 3,18,440

There are atleast two frequently used approaches for arriving at the Capital employed:

(i) based on a particular Balance Sheet and (ii) average of Capital employed at different balance sheet dates.

Capital employed is determined using historical cost values available at the balance sheet date. However if revalued figures are given that should be considered.

11 DETERMINATION OF CAPITAL EMPLOYED

Conventionally 'Capital Employed' means Total Assets *Minus* non-trading assets i.e. assets not used in the business *Minus* miscellaneous expenditure and losses *Minus* all outside liabilities.

As per this concept capital employed becomes equivalent to net worth less non-trading assets. But this concept has its own shortcomings:

(i) This approach ignores other long term fund in the business;

(ii) On the other hand, it considers preference share capital which bears fixed rate of dividend.

The argument in favour of adopting this approach is to count only such fund which is attributable to the shareholders. Alternatively, by capital employed one can mean long term capital employed. However, leverage gives some advantage as well as riskiness. Use of lower amount of owned fund results in higher return because of using borrowed fund advantageously. This is called leverage effect. By taking only 'shareholders fund' as capital employed, one can give weightage to leverage while calculating goodwill.

Example

Balance Sheet of X Ltd.

Liabilities	*₹ in lakhs*	*Assets*	*₹ in lakhs*
Share Capital	80	fixed assets	1,80
P & L A/c	20	Inventory	40
13% Debentures	1,20	Trade receivables	20
Trade payables	40	Cash & Bank	20
	2,60		2,60

Capital employed (shareholders' fund approach)

₹ 260 lakhs – ₹ 160 lakhs outside liabilities = ₹ 100 lakhs.

Capital employed (long term fund approach):

₹ 260 Lakhs – ₹ 40 lakhs Trade payables = ₹ 220 lakhs

Suppose normal return on shareholders' fund is 20% and normal return on long term fund is 18%

Also suppose Future Maintainable Profit (before interest) of X Ltd. is ₹ 38.4 lakhs.

Future Maintainable Profit (after interest) of X Ltd. is

₹ 22.8 lakhs i.e. (₹ 38.4 lakhs –₹ 15.6 lakhs debenture interest)

If long term fund approach is followed value of goodwill as per Capitalisation method is i.e.,

$$\frac{38.4\,\text{lakhs}}{0.18} - 220\,\text{lakhs}$$

₹ 213.33 lakhs – ₹ 220 lakhs

i.e., (-) ₹ 6.67 lakhs, negative goodwill.

If shareholders' fund approach is followed, value of goodwill as per capitalisation method is,

$$\frac{22.8 \text{ lakhs}}{0.20} - 100 \text{ lakhs}$$

₹ 114 lakhs – ₹ 100 lakhs

i.e., ₹ 14 lakhs, positive goodwill.

In this example, when long term capital employed was considered there was negative goodwill, but it became positive when shareholders' fund was considered. In the second approach leverage advantage has been taken into consideration. Thus, in goodwill valuation generally shareholders' fund approach is preferred.

Non-trading assets are ignored while computing capital employed. This is because surplus fund invested outside does not influence the future maintainable profit. Particularly, Non-trade investments are not counted while computing capital employed, but trade investments should be taken into consideration.

Another important aspect is often discussed regarding valuation of capital employed. What value should the accountant put for fixed assets and inventory. Since historical cost is not true indicator of the value of these assets, then it is suggested to take current cost of such assets. Current cost represents the cost for which asset can be replaced at its present state. However, if the asset cannot be replaced at its present state because of obsolescence, then cost at which its best substitute is available may be taken as current cost.

Capital employed may be determined using the value given by the latest balance sheet or taking simple average of the capitals employed at the beginning of the accounting period as well as at the end.

Illustration 1

Balance Sheets of X Ltd.
As on 31st March 2014 and 31st March 2015

(₹ In lakhs)

Liabilities	*31.3.14*	*31.3.15*	*Assets*	*31.3.14*	*31.3.15*
Share Capital	*18,00*	*18,00*	*Fixed assets*	*24,00*	*26,00*
General Reserve	*6,00*	*6,00*	*Investments*	*1,00*	*2,00*
Profit &Loss A/c	*6,80*	*9,40*	*Inventory*	*6,00*	*5,50*
12% Debentures	*2,00*	*2,00*	*Trade receivables*	*3,00*	*3,50*

18% Term Loan	*3,00*	*3,20*	*Cash and Bank*	*4,00*	*3,40*
Cash Credit	*1,20*	*80*			
Trade payables	*70*	*60*			
Tax Provision	*30*	*40*			
	38,00	*40,40*		*38,00*	*40,40*

Non-trade investments were 75% of the total investments. Find capital employed as on 31.3.14 and as on 31.3.15 and average capital employed.

Solution

Computation of capital employed

				(₹ in lakhs)
		31.3.14		*31.3.15*
Total Assets as per Balance Sheet		38,00		40,40
Less: Non-trade Investments		(75)		(1,50)
		37,25		38,90
Less: Outside Liabilities:				
12% Debentures	2,00		2,00	
18% Term Loan	3,00		3,20	
Cash Credit	1,20		80	
Trade payables	70		60	
Tax Provision	30	7,20	40	7,00
Capital employed		30,05		31,90

Average capital employed = $\frac{30{,}05 \text{ lakhs} + 31{,}90 \text{ lakhs}}{2}$ = ₹ 3,097.5 lakhs.

Illustration 2

Balance Sheet of AP Ltd. as on 31st March, 2015

Liabilities	*₹ in lakhs*	*Assets*	*₹ in lakhs*
Share Capital		*Land & Building*	*51,20*
Equity Shares of ₹ 10 each	*90,00*	*Plant & Machinery*	*108,70*
8½% Preference Shares	*20,00*	*Furniture*	*27,00*
General Reserve	*10,50*	*Vehicles*	*2,00*

Profit & Loss A/c	*30,00*	*Inventory*	*7,00*
18% Term Loan	*45,00*	*Trade receivables*	*4,50*
Cash Credit	*5,60*	*Cash & Bank*	*23,40*
Trade payables	*2,00*		
Provision for Taxation			
(net of advance tax)	*1,00*		
Proposed Dividend:			
Equity	*18,00*		
Preference	*1,70*		———
	223,80		*223,80*

Other information

Balance as on 1.4.14

Profit and Loss A/c ₹ *4,80 Lakhs*

Reserve ₹ *4,50 Lakhs*

Find out average capital employed of AP Ltd.

Solution

Computation of Average Capital Employed

	₹ *in lakhs*	₹ *in lakhs*
Total of Assets as per Balance Sheet as on 31.3.2015		223,80
Less: Outside Liabilities:		
18% Term Loan	45,00	
Cash Credit	5,60	
Trade payables	2,00	
Provision for Taxation	1,00	(53,60)
Capital employed as on 31.3.15		170,20
Less: 1/2 of profit earned		
Increase in Reserve balance	6,00	
Increase in Profit & Loss A/c	25,20	
Proposed Dividend	19,70	
	50,90	25,45
Average capital employed		144,75

12 FUTURE MAINTAINABLE PROFIT

We have seen earlier while discussing various methods of goodwill valuation that estimation of average maintainable profit is another important step in goodwill valuation. Future maintainable profit is ascertained taking either simple or weighted average of the past profits or by fitting trend line. Generally, profits of past three to five years are considered.

(i) Simple Average of Past Profits: If the past profits do not have any definite trend, average is taken to arrive at the future maintainable profit.

Example

Profits of the past five years of XX Ltd. are given below:

Year	*₹ '000*
2011	71,20
2012	87,20
2013	75,70
2014	82,70
2015	78,90

In this case no trend of past profit is available. So, simple average is best suitable method to arrive at a figure which may be taken as future maintainable profit.

$$\text{Future maintainable profit (₹ in '000)} = \frac{7,120 + 87,20 + 75,70 + 82,70 + 78,90}{5} = 79,14$$

(ii) Trend Equation: If the past profits show increasing or decreasing trend, linear trend equation gives better estimation of the future maintainable profit.

Example

B K Ltd. gives the following profit figures for the last five years:

Year	*Profits ₹ '000*
2011	37,20
2012	42,00
2013	47,50
2014	53,50
2015	57,20

Since, past profits show increasing trend, time series trend may be used to determine future maintainable profit. Applying Linear trend equation three to five years profit may be predicted and average of such future profits may be taken as future maintainable profit.

Year	*X*	*Y*	*XY*	X^2
2011	–2	37,20	–74,40	4
2012	–1	42,00	–42,00	1
2013	0	47,50	0	0
2014	1	53,50	53,50	1
2015	2	57,20	114,40	4
	0	237,40	51,50	10

$$A = \frac{\sum Y}{n} = \frac{237,40}{5} = 47,48$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{51,50}{10} = 51,5$$

Trend Equation is given by:

$$Y = 4748 + 515\ X$$

Alternatively, using trend equation, estimated profit will be:

Estimated Profit:

2016	4748 + 515 (3) =	₹ 62,93
2017	4748 + 515 (4) =	₹ 68,08
2018	4748 + 515 (5) =	₹ 73,23
Average of the Future Profit		₹ 68,08
i.e., Future Maintainable Profit		₹ 68,00 (say)

(iii) Weighted average of past profits: If the past profits show increasing or decreasing trend, then more weights are given to the profit figures of the immediate past years and less weight to the profit figures of the furthest past.

Example

Profits of the past five years of BB Ltd. are given below:

Year	*Profits ('000 ₹)*
2011	71,20
2012	82,50
2013	87,00
2014	92,00
2015	95,00

In this example past profits showed an increasing trend. Weighted average of past profits may be used in such cases to arrive at future maintainable profit.

Derivation of weighted average of the past profits:

Year	*Profits (P) '000 ₹*	*Weight (W)*	*PW*
2011	71,20	1	71,20
2012	82,50	3	247,50
2013	87,00	5	435,00
2014	92,00	7	644,00
2015	95,00	9	855,00
		25	22,52,70

$$\text{Weighted average profit} = \frac{\sum PW}{\sum W} = \frac{22,52,70}{25}$$

i.e. ₹ 9010.80 thousand.

12.1 Adjustments needed with past profits

Since past profits are used to make an estimation about the future maintainable profit, it is necessary to make appropriate adjustments for better projection. The following adjustments generally become necessary:

(i) Elimination of abnormal loss arising out of strikes, lock-out, fire, etc. Profit/loss figures which contain abnormal loss should either be ignored or eliminated. Similarly, if there is any abnormal gain included in past profits that needs elimination.

(ii) Interest/dividend or any other income from non-trading assets needs elimination because 'capital employed' used for valuation of goodwill comprises only of trading assets.

(iii) If there is a change in rate of tax, tax charged at the old rate should be added back and tax should be charged at the new rate.

(iv) Effect of change in accounting policies should be neutralised to have profit figures which are arrived at on the basis of uniform policies.

Illustration 3

PPX Ltd. gives the following information about past profits:

Year	*Profits (₹ '000)*
2011	*21,70*
2012	*22,50*
2013	*23,70*
2014	*24,50*
2015	*21,10*

On scrutiny it was found that upto 2013, PPX Ltd. followed FIFO method of finished inventory valuation thereafter adopted LIFO method.

Given below the details of Inventory valuation: (Figures in ₹ '000)

Year	*Opening Inventory*		*Closing Inventory*	
	FIFO	*LIFO*	*FIFO*	*LIFO*
2011	*40,00*	*39,80*	*46,00*	*41,20*
2012	*46,00*	*41,20*	*49,20*	*47,90*
2013	*49,20*	*47,90*	*38,90*	*39,10*
2014	*38,90*	*39,10*	*42,00*	*38,50*
2015	*42,00*	*38,50*	*45,00*	*43,10*

Determine future maintainable profits that can be used for valuation of goodwill.

Solution

Past profits of PPX Ltd. showed an increasing trend excepting in year 2015. But the effects of changes in accounting policies should be eliminated to ascertain the true nature of trend. Since the company has adopted LIFO method of Inventory valuation, profits may be recomputed applying these policies consistently in all the past years. Re-computation of profits following uniform accounting policies are shown below:

(Figures in '000)

Year	*Book Profits*	*Effect of LIFO on Valuation of Inventory.*	*Profits after elimination of the effect of change in Accounting policies*
2011	21,70	– 4,60	17,10
2012	22,50	+ 3,50	26,00
2013	23,70	+ 1,50	25,20
2014	24,50	–20	24,30
2015	21,10	—	21,10

After elimination of the effect of change in accounting policies, increasing trend disappeared. Rather profits were oscillating during the last four years excepting 2011. So a simple average may be taken of the last 4 years profits to arrive at the future maintainable profits:

Future Maintainable Profit ('000) = $\frac{26,00 + 25,20 + 24,30 + 21,10}{4}$ = 24,15

Working Note:

Effect of LIFO Valuation:

2011	Increase in Inventory as per FIFO valuation	6,00
	Less: Increase in Inventory per LIFO valuation	(1,40)
	Reduction in profit	4,60
2012	Increase in Inventory as per FIFO valuation	3,20
	Less: Increase in Inventory as per LIFO valuation	(6,70)
	Increase in profit	3,50
2013	Decrease in Inventory as per FIFO valuation	10,30
	Less: Decrease in Inventory as per LIFO valuation	(8,80)
	Increase in profit	1,50
2014	Opening Inventory as per FIFO valuation	38,90
	Less: Opening Inventory as per LIFO valuation	(39,10)
	Reduction in profit	20

13 NORMAL RATE OF RETURN

Apart from capital employed and future maintainable profit, the third important step in valuation of goodwill is determination of normal rate of return. It comprises of:

(i) the risk-free rate, i.e., the pure interest rate prevailing in the concerned economy; (the rate of return on long term government securities or fixed deposit in bank may be taken as risk-free rate)

(ii) the premium for business risks appropriate for the industry to which the firm/company belongs.

If the industry is well established and yielding profits steadily the rate of return that will satisfy entrepreneurs will be rather low though higher than the risk-free rate. Higher the business risk, higher will be the normal rate of return.

For practical purposes industry average return is taken as normal rate of return.

Illustration 4

On the basis of the following information, calculate the value of goodwill of Gee Ltd. at three years' purchase of super profits, if any, earned by the company in the previous four completed accounting years.

Summarised Balance Sheet of Gee Ltd. as at 31st March, 2015

Liabilities	*₹ in lakhs*	*Assets*	*₹ in lakhs*
Share Capital:		*Goodwill*	*310*
Authorised	*7,500*	*Land and Buildings*	*1,850*
Issued and Subscribed		*Machinery*	*3,760*
5 crore equity shares of ₹ 10 each, fully paid up	*5,000*	*Furniture and Fixtures*	*1,015*
		Patents and Trade Marks	*32*
Capital Reserve	*260*	*9% Non-trading Investments*	*600*
General Reserve	*3,293*	*Inventory*	*873*
Surplus i.e. credit balance of Profit and Loss (appropriation) A/c	*457*	*Trade receivables*	*614*
		Cash in hand and at Bank	*546*
Trade payables	*568*		
Provision for Taxation (net)	*22*		
	9,600		*9,600*

The profits before tax of the four years have been as follows:

Year ended 31st March	*Profit before tax in lakhs of ₹*
2011	*3,190*
2012	*2,500*
2013	*3,108*
2014	*2,900*

The rate of income tax for the accounting year 2010-2011 was 40%. Thereafter it has been 38% for all the years so far. But for the accounting year 2014-2015 it will be 35%.

In the accounting year 2010-2011, the company earned an extraordinary income of ₹ 1 crore due to a special foreign contract. In August, 2011 there was an earthquake due to which the company lost property worth ₹ 50 lakhs and the insurance policy did not cover the loss due to earthquake or riots.

9% Non-trading investments appearing in the above mentioned Balance Sheet were purchased at par by the company on 1st April, 2012.

The normal rate of return for the industry in which the company is engaged is 20%. Also note that the company's shareholders, in their general meeting have passed a resolution sanctioning the directors an additional remuneration of ₹ 50 lakhs every year beginning from the accounting year 2014-2015.

Solution

(1) Capital employed as on 31st March, 2015 (Refer to 'Note')

		₹ in lakhs
Land and Buildings		1,850
Machinery		3,760
Furniture and Fixtures		1,015
Patents and Trade Marks		32
Inventory		873
Trade receivables		614
Cash in hand and at Bank		546
		8,690
Less: Trade payables	568	
Provision for taxation (net)	22	590
		8,100

(2) Future maintainable profit

(Amounts in lakhs of ₹)

	2010-2011 ₹	*2011-2012* ₹	*2012-2013* ₹	*2013-2014* ₹
Profit before tax	3,190	2,500	3,108	2,900
Less: Extraordinary income due to foreign contract	(100)			
Add: Loss due to earthquake		50		
Less: Income from non-trading investments			(54)	(54)
	3,090	2,550	3,054	2,846

As there is no trend, simple average profits will be considered for calculation of goodwill.

Total adjusted trading profits for the last four years = ₹ (3,090 + 2,550 + 3,054 + 2,846)

= ₹ 11,540 lakhs

Average trading profit before tax = $\left(\frac{₹\ 11{,}540\ \text{lakhs}}{4}\right)$ = ₹ 2,885 lakhs

Less: Additional remuneration to directors	(50)	Lakh
	2,835	Lakh
Less: Income tax @ 35%(approx.)	(992)	(Approx.)
	1,843	Lakh

(3) Valuation of Goodwill on Super Profits Basis

	₹ in lakh
Future maintainable profits	1,843
Less: Normal profits (20% of ₹ 8,100 lakhs)	(1,620)
Super profits	223

Goodwill at 3 years' purchase of super profits = 3 x ₹ 223 lakhs = ₹ 669 lakhs

Note: In the above solution, goodwill has been calculated on the basis of closing capital employed (i.e. on 31st March, 2015). Goodwill should be calculated on the

basis of 'average capital employed' and not 'actual capital employed' as no trend is being observed in the previous years' profits. The average capital employed cannot be calculated in the absence of details about profits for the year ended 31st March, 2015. Since the current year's profit has not been given in the question, goodwill has been calculated on the basis of capital employed as on 31st March, 2015.

Illustration 5

Find out Leverage effect on Goodwill in the following case:

(i)	*Current cost of capital employed*	*₹ 10,40,000*
(ii)	*Profit earned after current cost adjustments*	*₹ 1,72,000*
(iii)	*10% long term loan*	*₹ 4,50,000*
(iv)	*Normal rate of return:*	
	On equity capital employed	*15.6%*
	On long-term capital employed	*13.5%*

Solution

			₹
a	Profit for equity fund after current cost adjustment		1,72,000
b	Profit (as per Long-term fund approach)		
	Profit for equity fund	1,72,000	
	Add: Interest on Long-term loan (4,50,000 x 10%)	45,000	2,17,000
c	Current cost of capital employed (by Equity approach)		10,40,000
d	Capital employed as per Long-term fund approach		
	Current cost of capital employed (by Equity approach)	10,40,000	
	Add: 10% Long term loan	4,50,000	14,90,000
e	Value of Goodwill		
	(A) By Equity Approach		
	Capitalised value of Profit as per equity		11,02,564

	approach = $\frac{1,72,000}{15.60} \times 100$		
	Less: Capital employed as per equity approach		(10,40,000)
	Value of Goodwill		62,564
(B)	By Long-Term Fund Approach		
	Capitalized value of Profit as per Long-term fund approach = $\frac{2,17,000}{13.5} \times 100$		16,07,407
	Less: Capital employed as per Long-term fund approach		(14,90,000)
	Value of Goodwill		1,17,407

Leverage effect on Goodwill:

Adverse Leverage effect on goodwill is ₹ 54,843 (i.e. ₹ 1,17,407 – ₹ 62,564).

SUMMARY

Goodwill is a thing which is not so easy to describe but in general words good-name, reputation and wide business connection which helps the business to earn more profits than the profit could be earned by a newly started business. The monetary value of the advantage of earning more profits is known as goodwill. Goodwill is an attractive force, which brings in customers to old place of business. Goodwill is an intangible but valuable asset.

Future maintainable profit is ascertained taking either simple or weighted average of the past profits or by fitting trend line. If the past profits do not have any definite trend, average is taken to arrive at the future maintainable profit. If the past profits show increasing or decreasing trend, linear trend equation gives better estimation of the future maintainable profit. If the past profits show increasing or decreasing trend, then more weights are given to the profit figures of the immediate past years and less weight to the profit figures of the furthest past.

The following adjustments from past profits are generally made:

(i) Elimination of abnormal loss arising out of strikes, lock-out, fire, etc. Profit/loss figures which contain abnormal loss should either be ignored or

eliminated. Similarly, if there is any abnormal gain included in past profits that needs elimination.

(ii) Interest/dividend or any other income from non-trading assets needs elimination because 'capital employed' used for valuation of goodwill comprises only of trading assets.

(iii) If there is a change in rate of tax, tax charged at the old rate should be added back and tax should be charged at the new rate.

(iv) Effect of change in accounting policies should be neutralised to have profit figures which are arrived at on the basis of uniform policies.

TEST YOUR KNOWLEDGE

MCQs

1. Liquidation value is also called
   (a) NRV
   (b) Breakup value.
   (c) Exit value.
   (d) Replacement value.
2. Replacement *value is also known as*
   (a) Current cost.
   (b) Breakup value.
   (c) Exit value.
   (d) Recoverable value.
3. Recoverable (amount) value is
   (a) same as Current cost.
   (b) Value in use.
   (c) Higher of the net selling price and value in use.
   (d) Lower of the net selling price and value in use.
4. Capital employed by X Ltd. ₹ 17,00,000, Future maintainable profit ₹ 3,50,000, Normal rate of return 15%, Super profit can be maintained for 5 years. Goodwill is
   (a) 4,75,000.

(b) 4,50,000.

(c) 5,00,000.

(d) 2,50,000.

5. Non-trading assets are ignored while computing capital employed because

(a) Surplus fund invested outside the business does not influence the future maintainable profit.

(b) They are not the part of the business assets.

(c) It is difficult to estimate its realizable value.

(d) There is no generation of revenue from it.

Theoretical Questions

Question 1

Explain significant measurement bases in brief.

Question 2

What is meant by Capital Employed?

Practical Problems

Question 1

Find out the average capital employed of ND Ltd. from its summarized Balance Sheet as at 31st March, 2017:

Liabilities	(₹ in lakhs)	Assets	(₹ in lakhs)
Share Capital:		Fixed Assets:	
Equity shares of ₹ 10 each	50.00	Land and buildings	25.00
9% Preference shares fully paid up	10.00	Plant and machinery	80.25
Reserve and Surplus:		Furniture and fixture	5.50
General reserve	12.00	Vehicles	5.00
Profit and Loss	30.40	Investments	10.00
Secured loans:		Inventory	6.75
16% Debentures	5.00	Trade Receivables	4.90
16% Term loan	18.00	Cash and bank	10.40
Cash credit	13.30		

Trade Payables	2.70		
Provision for taxation	6.40		
	147.80		147.80

Non-trade investments were 20% of the total investments.

Balances as on 1.4.2016 to the following accounts were:
Profit and Loss account ₹ 8.20 lakhs, General reserve ₹ 6.50 lakhs.

Question 2

The summarized Balance Sheet of R Ltd. for the year ended on 31st March, 2013, 2014 and 2015 are as follows:

	(₹ in thousands)		
Liabilities	31.3.2013	31.3.2014	31.3.2015
3,20,000 equity shares of ₹ 10 each, fully paid	3,200	3,200	3,200
General reserve	2,400	2,800	3,200
Profit and Loss account	280	320	480
Trade Payables	1,200	1,600	2,000
	7,080	7,920	8,880
Assets			
Goodwill	2,000	1,600	1,200
Building and Machinery less, depreciation	2,800	3,200	3,200
Inventory	2,000	2,400	2,800
Trade Receivables	40	320	880
Bank balance	240	400	800
	7,080	7,920	8,880

Additional information:

(a) Actual valuations were as under:

Building and machinery less, depreciation	3,600	4,000	4,400
Inventory	2,400	2,800	3,200
Net profit (including opening balance			

after writing off depreciation, goodwill, tax provision and transferred to general reserve)	840	1,240	1,640

(b) Capital employed in the business at market value at the beginning of 2012-13 was ₹ 73,20,000 which included the cost of goodwill. The normal annual return on average capital employed in the line of business engaged by R Ltd. is 12½%.

(c) The balance in the general reserve on 1st April, 2012 was ₹ 20 lakhs.

(d) The goodwill shown on 31.3.2013 was purchased on 1.4.2012 for ₹ 20 lakhs on which date the balance in the Profit and Loss account was ₹ 2,40,000.

(e) Find out the average capital employed in each year. Also compute Goodwill, to be valued at 5 year's purchase of Super profit (Simple average method).

ANSWERS/ HINTS

MCQs

[1. (b), 2. (a), 3. (c); 4. (a); 5. (a)]

Theoretical Questions

Answer 1

Main Measurement bases are: *Historical cost.; Current cost; Realizable (settlement) value; Present value.*

Answer 2

Capital employed means Total Assets *Minus* non-trading assets i.e. assets not used in the business *Minus* miscellaneous expenditure and losses *Minus* all outside liabilities.

Practical Problems

Answer 1

Computation of Average Capital employed

		(₹ in lakhs)
Total Assets as per Balance Sheet		147.8
Less: Non-trade investments (20% of ₹ 10 lakhs)		(2.00)
		145.80

Less: Outside Liabilities:		
16% Debentures	5.00	
16% Term Loan	18.00	
Cash Credit	13.30	
Trade Payables	2.70	
Provision for Taxation	6.40	(45.40)
Capital Employed as on 31.03.2017		100.40
Less: ½ of profit earned:		
Increase in Reserve balance	5.50	
Increase in Profit & Loss A/c	22.20	
	27.70	
50% of Total		13.85
Average capital employed		86.55

Answer 2

Capital Employed at the end of each year

	31.3.2013 ₹	*31.3.2014* ₹	*31.3.2015* ₹
Goodwill	20,00,000	16,00,000	12,00,000
Building and Machinery (Revaluation)	36,00,000	40,00,000	44,00,000
Inventory (Revalued)	24,00,000	28,00,000	32,00,000
Trade Receivables	40,000	3,20,000	8,80,000
Bank Balance	2,40,000	4,00,000	8,00,000
Total Assets	82,80,000	91,20,000	104,80,000
Less: Trade Payables	(12,00,000)	(16,00,000)	(20,00,000)
Closing Capital	70,80,000	75,20,000	84,80,000
Add: Opening Capital	73,20,000	70,80,000	75,20,000
Total	1,44,00,000	1,46,00,000	1,60,00,000
Average Capital	72,00,000	73,00,000	80,00,000

Since the goodwill has been purchased, it is taken as a part of Capital employed.

Valuation of Goodwill

(i)	**Future Maintainable Profit**	31.3.2013	31.3.2014	31.3.2015
	Net Profit as given	8,40,000	12,40,000	16,40,000
	Less: Opening Balance	(2,40,000)	(2,80,000)	(3,20,000)
	Adjustment for Valuation of Opening Inventory	-	(4,00,000)	(4,00,000)
	Add: Adjustment for Valuation of closing inventory	4,00,000	4,00,000	4,00,000
	Goodwill written off	-	4,00,000	4,00,000
	Transferred to General Reserve	4,00,000	4,00,000	4,00,000
	Future Maintainable Profit	14,00,000	17,60,000	21,20,000
	Less: 12.50% Normal Return	(9,00,000)	(9,12,500)	(10,00,000)
(ii)	**Super Profit**	5,00,000	8,47,500	11,20,000

(iii) **Average Super Profit =** ₹ (5,00,000+8,47,500+11,20,000)÷3 = ₹ 8,22,500

(iv) **Value of Goodwill** at five years' purchase= ₹ 8,22,500 × 5 = ₹ 41,12,500.