8. VALUATION OF GOODWILL

NO. OF PROBLEMS IN 40e OF CA INTER: CLASSROOM - 07, ASSIGNMENT - 08

NO. OF PROBLEMS IN 41e OF CA INTER: CLASSROOM - 07, ASSIGNMENT - 08

MODEL WISE ANALYSIS OF PAST EXAM PAPERS

MODEL NO.	M-12	N-12	M-13	N-13	M-14	N-14	M-15	N-15	M-16	N-16	M-17	N-17	M-18	N-18
Model - 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Model - 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Model - 3	-	-	10	16	16	-	08	-	-	-	16	08	-	10
Model - 4	-	06	-	-	-	-	-	06	-	-		-	5	-

Model - 1 : Capital Employed

Model - 2 : Future Maintainable Profits

Model - 3 : Goodwill Methods

Model - 4 : Leverage Effect on Goodwill

SIGNIFICANCE OF EACH PROBLEM COVERED IN THIS MATERIAL

Problem No. in this material	Problem No. in NEW SM	Problem No. in OLD PM	RTP	MTP	Previous Exams	Remarks
CRD 1	PQ 1	-	-	-	-	CA INTER
CRD 2	ILL 1	-	-	-	-	CA INTER
CRD 3	ILL 3	-	-	-	-	CA INTER
CRD 4	ILL 4	-	-	-	-	CA INTER
CRD 5	ILL 5	-	-	-	-	CA INTER
CRD 6	-	-	-	M18(II)	N18 - 10M	CA INTER
CRD 7	ILL 6	-	-	-	-	CA INTER
ASG 1	-	-	M18	-	-	CA INTER
ASG 2	ILL 2	-	-	-	-	CA INTER
ASG 3	-	-	-	-	N17	CA FINAL
ASG 4	-	-	-	-	-	MP
ASG 5	-	-	M12	-	-	CA FINAL
ASG 6	-	-	-	M18(I)	-	CA INTER
ASG 7	-	-	-	-	N15	CA FINAL
ASG 8	-	-	-	-	M18	CA INTER
TQ 1	TQ 1	-	-	-	-	CA INTER
TQ 2	TQ 2	-	-	-	-	CA INTER

SECTION - 1: VALUATION

1. INTRODUCTION:

   a) Valuation is the process of estimating what something is worth. In simple, measurement of value in monetary terms.

   b) Valuation can be used as a very effective business tool by management for better decision making throughout the life of the enterprise.

c) Valuations are needed for many reasons such as investment analysis, capital budgeting, merger and acquisition transactions, financial reporting, determination of tax liability.

2. CONCEPT OF VALUATION:

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

a) Valuation of Tangible Fixed Assets

b) Valuation of Intangibles including brand valuation and valuation of goodwill

c) Valuation of Shares

d) Valuation of Business

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

Note: In this chapter we will deal with **only valuation of Goodwill**.

3. NEED FOR VALUATION:

Financial Statements must give a True and Fair View of the state of affairs of an Entity. Proper valuation of all assets and Liabilities is required to ensure true and fair financial position of the Business Entity.

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:

There are different measurement bases which are applied 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 or Replacement 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 or Net Realizable Value or Net Selling Price or Exit 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 or Economic 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.

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

f) **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.

g) **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.

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

5. TYPES OF VALUE:

a) **Going Concern Value:** It is the Value of a Firm as an Operating Business.

b) **Liquidation Value:** It is the projected Price that a Firm would receive by selling its Assets if it were going out of Business.

c) **Book Value:** It is the value of an Asset as carried on a Balance Sheet.

d) **Market Value:** It is the price at which Buyers and Sellers trade similar items in an open market place. The Quoted Price at which Investors Buy or Sell a Share or a Bond at a given time is its Market Value.

e) **Fair Market Value:** It is the price that a given property or asset would fetch in the market place provided, Prospective Buyers and Sellers have reasonable knowledgeable about the Asset and are free from any undue pressure

f) **Intrinsic Value:** It is the Value at which as Asset should sell based on applying data inputs to a Valuation Theory or Valuation Model.

g) **Extrinsic Value:** It is the difference between an Option's Price and the Intrinsic Value.

6. APPROACHES OF VALUATION:

Three generally accepted approaches to valuation are as follows:

a) Cost Approach: e.g. Adjusted Book Value

b) Market Approach: e.g. Comparables

c) 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:

a) **Cost Approach:** This technique involves restating the value of individual assets to reflect their fair market values.

b) **Market Approach:** The market approach, as the name implies, relies on signs from the real market place to determine what a business is worth. 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.

c) **Income approach:** The income approach considers the core reason for running a business i.e. making money. Since the business value must be established in 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.

SECTION 2 - VALUATION OF GOODWILL

1. INTRODUCTION AND MEANING:

a) Goodwill is the value of the reputation of the firm/company/concern/person. It is an Intangible but not a fictitious asset.

b) Goodwill arises from business connections, trade name or reputation of an enterprise or from other Intangible factors.

c) In other words, it is the excess earning capacity of the enterprise in comparison with other enterprises of similar size, operating within the same industry.

d) Goodwill of the business may arise in two ways. It may be Purchased Goodwill or Inherent (self acquired) Goodwill.

e) Purchased Goodwill arises when a business is acquired for a price which is more than the value of net assets taken over.

f) Although not accounted Self acquired Goodwill is required for Valuation of Shares, Business and other decision making purposes. It is calculated by different methods. Each method gives different values.

2. METHODS FOR VALUATION OF GOODWILL:

A. Capitalisation method

B. Super profits method

C. Annuity method (Refinement of super profits method)

A. **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.

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

Goodwill = Normal Capital Employed - Actual Closing Capital Employed

Factors considered in this method are:

- Future maintainable profit;
- Actual capital employed in the business enterprise for which goodwill is to be computed;
- Normal rate of return in the industry to which the business enterprise belongs.

Example: Capital employed in X Ltd. is Rs.17,00,000 future maintainable profit is Rs.3,00,000 and normal rate of return is 15%.

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

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.

B. **SUPER PROFITS METHOD:** Excess of future maintainable profit over normally expected profits is called super profit. Under super profit method

a) Goodwill = Super profit x No. of Years of Purchase

b) Super profit = Future maintainable profits - (Actual capital employed x Normal rate of return)

c) No. of years of purchase = future years for which such super profit is expected

Factors considered under this method are:

- Actual capital employed;
- Future maintainable profit;
- Normal rate of return;
- Period for which super profit is projected.

C. **ANNUITY METHOD:**

i) It is a refinement of the super profit method.

ii) 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.

iii) Further future values of super profits should be discounted using appropriate discount factor.

iv) When uniform annual super profit is expected, annuity factor can be used for discounting the future values for converting into the present value.

v) Here in addition to the factors considered in super profit method, appropriate discount rate is to be chosen for discounting the cash flows.

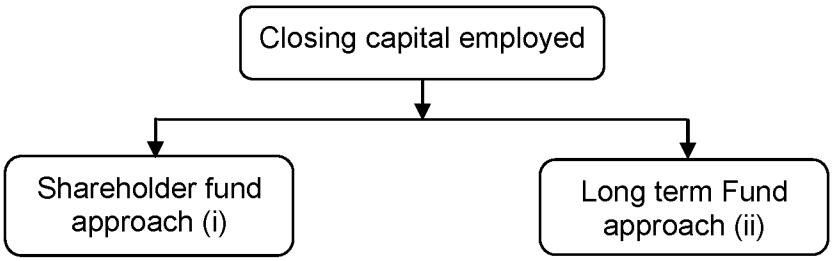
Example:

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

Goodwill = Rs. 95,000 × 3.352 = Rs. 3,18,440

3. **FACTORS AFFECTING THE VALUATION OF GOODWILL:**

A. **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.**



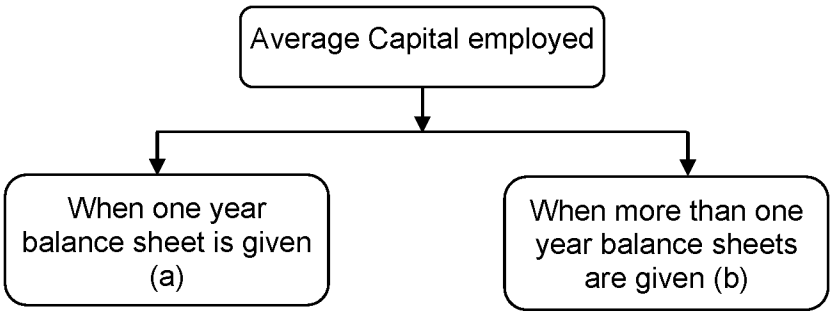
i) Computation of closing capital employed (Share holder fund approach)

Particulars	Amount
i) Total assets at their current values:	
Non - current Assets(excluding goodwill, non-trade investments, capital work in progress and other non-operating assets)	XXX
Current assets	XXX
Total	**XXX**
ii) Less: Outsider's liabilities at current amounts:	
Non-current liabilities	(XXX)
Current liabilities (including provision for tax but excluding proposed dividend)	(XXX)
Total	**XXX**
iii) Closing capital employed (i-ii)	**XXX**

ii) Computation of closing capital employed (Long term fund approach)

PARTICULARS	Amount
i) Total assets at their current values:	
Non - current Assets(excluding goodwill, non-trade investments, capital work in progress and other non-operating assets)	XXX
Current assets	XXX
Total	**XXX**
ii) Less: Current liabilities at current amounts: (including provision for tax but excluding proposed dividend)	**(**XXX)
Total	**XXX**
iii) Closing capital employed (i-ii)	**XXX**

Calculation of average capital employed: Average capital employed can be calculated in the following ways:



a) Computation of average capital employed when one year balance sheet is given

Particulars	Amount
i) Closing capital employed	XXX
ii) Add: Dividend and dividend tax paid at the end of current year	XXX
iii) Adjusted closing capital employed (i + ii)	XXX
iv) Less: Half of [(current year's adjusted profits before tax + income from non-trade investments) - tax]	(XXX)
v) Average capital employed [iii - iv]	**XXX**

b) Computation of average capital employed when more than one year balance sheets are given:

PARTICULARS	Amount
i) Closing capital employed	XXX
ii) **Add:** Dividend and dividend tax paid at the end of current year	XXX
iii) Adjusted closing capital employed (i + ii)	XXX
iv) Opening capital employed	XXX
v) Average capital employed [(iii + iv)/2]	**XXX**

Notes:

- Unless otherwise stated, capital employed should be calculated on the basis of share holders fund approach
- The average capital employed is used only in the case of super profits method where past profits are considered for valuation (past profits are considered in situations where there is inability to project future profits)
- If average capital employed cannot be found out with the given information then terminal capital employed can be used.

Assets and Liabilities are valued as under:

Capital employed represents the fair value of the net assets used in the business for earning the profits (FMP)

1. **Fixed Assets:**
   - **a)** Consider only those assets, which are in use.(Exclude unproductive assets Eg:Surplus land)
   - **b)** Consider assets at fair value to the business viz., lower of replacement value and economic value.
   - **c)** Do not consider goodwill, if any, existing in the books, since the objective of this exercise is to value goodwill.
   - **d)** Patents or trademarks or licenses should be considered at fair value only to the extent they are used for earning FMP.
   - **e)** If assets have to be considered at book value, such book value should be arrived after proper application of accounting principles laid out in various accounting standards.
2. **Investments:**
   - **a)** Trade Investments - Value at fair value.
   - **b)** Non trade Investments - Ignore.
3. **Current assets:**
   - **a)** Stock: Realisable value (Difference in valuation of stock should be adjusted against the profits of the year preceding the date of valuation)
   - **b)** Debtors: Realisable value
   - **c)** Loans and Advances : Recoverable value, if in the nature of trade advances
4. **Liabilities:** To be considered at redemption amounts (Discount or Premium)

B. **DETERMINATION OF FUTURE MAINTAINABLE PROFITS:**

Steps for computation of FMP:

Step-1:

- Select the period for which past profits have to be considered
- Recent years profits are considered in case of new enterprises

Step-2: The profits considered should be subject to following criteria:

Particulars	Year I Rs.	Year II Rs.	Year III Rs.	Year IV Rs.
Profits after tax	xxx	xxx	xxx	Xxx
Add: Tax at actual rate [(profit after tax / tax rate)*(1 - tax rate)]	xxx	xxx	xxx	Xxx
Profits before tax	xxx	xxx	xxx	Xxx
Add: Abnormal Losses (e.g. Loss on Sale of Fixed Assets)	xxx	xxx	xxx	Xxx
Less: Abnormal Profits (e.g. Profit on Sale of Fixed Assets)	(xxx)	(xxx)	(xxx)	(xxx)
Less: Income from Non - Trade Investments	(xxx)	(xxx)	(xxx)	(xxx)
Add: Capital Expenditure charged to Revenue (e.g. Purchase of Machinery wrongly charged to P&L A/c)	xxx	xxx	xxx	Xxx
Less: Depreciation on above Fixed Asset	(xxx)	(xxx)	(xxx)	(xxx)
Less: Capital Receipt credited to Revenue (e.g. Sale Proceeds of Machinery wrongly charged to P&L A/c)	(xxx)	(xxx)	(xxx)	(xxx)
Add: Depreciation on above Fixed Asset	xxx	xxx	xxx	Xxx
Add: Over Valuation of opening inventories	xxx	xxx	xxx	Xxx
Less: Over Valuation of Closing Inventories	(xxx)	(xxx)	(xxx)	(xxx)
Add: Revenue Incomes relating to previous years not yet Credited	xxx	xxx	xxx	Xxx
Less: Revenue Expenses relating to previous Years not yet Provided	(xxx)	(xxx)	(xxx)	(xxx)
Past Adjusted Profits before tax	**xxx**	**xxx**	**xxx**	**Xxx**

Step - 3: The profits ascertained above should then be Projected

- **Fluctuating profits - Simple average of past profits:**

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

Year	Rs' 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.

Future maintainable profit (Rs.'000)= $\frac{71{,}20+87{,}20+75{,}70+82{,}70+78{,}90}{5}=79{,}14$

- **Profits with a trend - Weighted average method:** 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(Rs.'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) in'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**

Weighted average profit= $\frac{\sum PW}{\sum W} = \frac{22,52,70}{25}$ Rs.9010.80 thousand

Step-4: The future adjustments to be considered for above determined profits are as follows:

Particulars	Rs.
Average past adjusted profits	**XXX**
Add: Incomes not earned in the past but likely to be earned in the future	**XXX**
Less: Incomes earned in the past but not likely to be earned in the future	**(XXX)**
Add: Expenses incurred in the past but not likely to be incurred in the future	**XXX**
Less: Expenses not incurred in the past but likely to be incurred in the future	**(XXX)**
Future maintainable profit before tax	**XXX**
Less: Tax at likely future rate	**(XXX)**
Future maintainable profits after tax	**XXX**

C. **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. NRR represents the rate of return expected from industry comprising enterprises of similar size. 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) Risk premium

- ✓ Premium for business risk
- ✓ Premium for financial risk

Note: NRR is calculated as the earning yield of representative company whose share is quoted in the stock exchange

NRR = Earnings yield = $\frac{EPS}{MPS} x100$ i.e.; inverse of PE Ratio

4. **LEVERAGE EFFECT ON GOODWILL:** Generally shareholders fund approach is preferred since it takes into consideration the leverage effect. Leverage effect gives some advantage as well as riskiness. Leverage effect is advantageous if the borrowed funds carrying rate of interest lower than the rate of Return on investment (ROI) or vice versa.

Leverage effect = Value of goodwill based on shareholder fund approach - Value of goodwill based on long term fund approach.

Example: Balance Sheet of X Ltd.

Liabilities	Rs. in lakhs	Assets	Rs. in lakhs
Share capital	80	Fixed assets	180
P & L A/c	20	Inventory	40
13 % Debentures	120	Trade receivables	20
Trade payables	40	Cash & Bank	20
	260		**260**

Capital employed (shareholders fund approach): = Rs.260 lakhs - Rs. 160 lakhs outside liabilities = Rs. 100 lakhs.

Capital employed (long term fund approach): Rs. 260 Lakhs - Rs. 40 lakhs Trade payables = Rs. 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 Rs. 38.4 lakhs. Future Maintainable Profit (after interest) of X Ltd. Is Rs. 22.8 lakhs i.e. (Rs. 38.4 lakhs - Rs. 15.6 lakhs debenture interest)

If long term fund approach is followed value of goodwill as per Capitalisation method is i.e., $\frac{384\text{lakhs}}{0.18} - 220\text{lakhs}$ = Rs.213.33 lakhs - Rs.220 lakhs = Rs. (6.67) lakhs, negative goodwill.

If shareholder's fund approach is followed, value of goodwill as per capitalization methods is, $\frac{224\text{lakhs}}{0.20} - 100\text{lakhs}$ = Rs.114 lakhs - Rs.100 lakhs = Rs. 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.

PROBLEMS FOR CLASSROOM DISCUSSION

MODEL 1: PROBLEMS ON CAPITAL EMPLOYED

PROBLEM 1: Find out the average capital employed of HDL Ltd. from its summarized Balance Sheet as at 31st March, 2018:

Liabilities	(Rs. in lakhs)	Assets	(Rs. in lakhs)
Share Capital:		Fixed Assets:	
Equity shares of Rs. 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 1.4.2017 to the following accounts were: Profit and Loss account Rs. 8.20 lakhs, General reserve Rs. 6.50 lakhs.

(A) (NEW SM) (ANS.: AVERAGE CAPITAL EMPLOYED RS.86.55 LAKHS)

Note:_____

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PROBLEM 2: (PRINTED SOLUTION AVAILABLE) The following is the balance sheet of X Ltd as on 31st March 2017 and 31st March 2018: **(Rs. in Lakhs)**

Liabilities	31.3.17	31.3.18	Assets	31.3.17	31.3.18
Share Capital	1800	1800	Fixed assets	2400	2600
General Reserve	600	600	Investments	100	200
Profit & Loss A/c	680	940	Inventory	600	550

12% Debentures	200	200	Trade receivables	300	350
18% Term Loan	300	320	Cash and Bank	400	340
Cash Credit	120	80			
Trade payables	70	60			
Tax provision	30	40			
	3800	**4040**		**3800**	**4040**

Non-trade investments were 75% of the total investments. Find capital employed as on 31.3.17 and as on 31.3.18 and average capital employed. ***(A) (NEW SM) (ANS: AVERAGE CAPITAL EMPLOYED - RS.3097.5 LAKHS)***

(SOLVE PROBLEM NO: 1&2 OF ASSIGNMENT PROBLEMS AS REWORK)

Note:_____

MODEL 2: PROBLEMS ON FUTURE MAINTAINABLE PROFITS

PROBLEM 3: (PRINTED SOLUTION AVAILABLE) PPX Ltd. gives the following information about past profits:

Year	Profits (Rs.'000)
2014	21,70
2015	22,50
2016	23,70
2017	24,50
2018	21,10

On scrutiny it is found

i) That upto 2016, PPX Ltd. followed FIFO method of finished inventory valuation thereafter adopted LIFO method,

ii) That upto 2017 it followed straight line depreciation and thereafter adopted written down value method.

Given below the details of Inventory valuation: **(Figures in Rs.'000)**

Year	Opening Inventory		Closing Inventory	
	FIFO	LIFO	FIFO	LIFO
2014	40,00	39,80	46,00	41,20
2015	46,00	41,20	49,20	47,90
2016	49,20	47,90	38,90	39,10
2017	38,90	39,10	42,00	38,50
2018	42,00	38,50	45,00	43,10

Straight line and written down value depreciation were as follows:

Year	Straight Line (Rs.'000)	W.D.V (Rs.'000)
2014	12,10	17,00
2015	14,15	18,10
2016	15,00	19,25
2017	16,70	19,60
2018	18,00	19,40

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

(A) (NEW SM) (ANS.: FUTURE MAINTAINABLE PROFITS (IN '000) - RS21,37.50)

Note:_____

MODEL 3: PROBLEMS ON CALCULATION OF GOODWILL

Problem 4: (Calculation of goodwill by adjusting the past profits) 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, 2018

Liabilities	Rs. (in lakhs)	Assets	Rs. (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 Rs. 10 each, fully paid up	5,000	Furniture and Fixtures	1,015
Capital Reserve	260	Patents and Trade Marks	32
General Reserve	3,293	9% Non-trading Investments	600
Surplus i.e. credit balance of Profit and Loss appropriation) A/c	457	Inventory	873
Trade payables	568	Trade receivables	614
Provision for Taxation (net)	22	Cash in hand and at Bank	546
	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 Rs.
2014	3,190
2015	2,500
2016	3,108
2017	2,900

The rate of income tax for the accounting year 2013-2014 was 40%. Thereafter it has been 38% for all the years so far. But for the accounting year 2017-2018 it will be 35%.

In the accounting year 2013-2014, the company earned an extraordinary income of Rs. 1crore due to a special foreign contract. In August, 2014 there was an earthquake due to which the company lost property worth Rs. 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, 2015. 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 Rs. 50 lakhs every year beginning from the accounting year 2017-2018. ***(A)(NEW SM) (ANS.: VALUE OF GOODWILL - RS.669 LAKHS)***

(SOLVE PROBLEM NO: 3 OF ASSIGNMENT PROBLEMS AS REWORK)

Note:_____

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PROBLEM 5: (Calculation of NRR and adjusting past and future profits and valuation of Goodwill) The Balance Sheet of D Ltd. on 31st March, 2018 is as under:

Liabilities	Rs.	Assets	Rs.
1,25,000 shares of Rs. 100 each fully paid up	1,25,00,000	Goodwill	10,00,000
Bank overdraft	46,50,000	Building	80,00,000
Trade Payables	52,75,000	Machinery	70,00,000
Provision for taxation	12,75,000	Inventory	80,00,000
Profit and loss account	53,00,000	Trade receivables (all considered good)	50,00,000
	2,90,00,000		**2,90,00,000**

In 2001, when the company started its activities the paid up capital was the same. The Profit/Loss for the last five years is as follows:

2013-2014: Loss (13,75,000), 2014-2015: Profit Rs. 24,55,000, 2015-2016: Profit Rs. 29,25,000, 2016-2017: Profit Rs. 36,25,000, 2017-2018: Profit Rs. 42,50,000.

Income-tax rate so far has been 40% and the above profits have been arrived at on the basis of such tax rate. From 2017-2018, the rate of income-tax should be taken at 45%. 10% dividend in 2014-2015, 2015-2016 and 15% dividend in 2016-2017 and 2017-2018 has been paid. Market price of this share on 31st March, 2018 is Rs.125. With effect from 1st April, 2018, the Managing Directors remuneration will be Rs.20,00,000 instead of Rs. 15,00,000. The company has secured a contract from which it can earn an additional Rs.10,00,000 per annum for the next five years. Calculate the value of goodwill at 3 years purchase of super profit. (For calculation of future maintainable profits weighted average is to be taken). ***(A) (NEW SM) (ANS.: VALUE OF GOODWILL - RS.64,25,124)***

(SOLVE PROBLEM NO: 4 & 5 OF ASSIGNMENT PROBLEMS AS REWORK)

Note:_____

PROBLEM 6: (Valuation of Goodwill by considering purchased goodwill in capital employed and valuation of business) The summarized Balance Sheet of R Ltd. for the year ended on 31st March, 2016, 2017 and 2018 are as follows:

	(Rs. in thousands)		
Liabilities	**31.3.2016**	**31.3.2017**	**31.3.2018**
3,20,000 equity shares of Rs. 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 2015-16 was Rs. 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, 2015 was Rs. 20 lakhs.

d) The goodwill shown on 31.3.2016 was purchased on 1.4.2015 for Rs. 20 lakh on which date the balance in the Profit and Loss account was Rs. 2,40,000. Find out the average capital employed in each year.

e) Goodwill is to be valued at 5 year's purchase of Super profit (Simple average method). Find out the total value of the business as on 31.3.2018.

(A) (NEW SM, MTP M18, N18 (N) - 10M) (ANS.: VALUE OF GOODWILL- RS.41,12,500 ; VALUE OF BUSINESS - 1,13,92,500)

(SOLVE PROBLEM NO: 6 OF ASSIGNMENT PROBLEMS AS REWORK)

Note:_____

MODEL 4: PROBLEMS ON LEVERAGE EFFECT ON GOODWILL

PROBLEM 7: Find out Leverage effect on Goodwill in the following case:

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

(A) (NEW SM) (ANS.: ADVERSE LEVERAGE EFFECT ON GOODWILL IS RS.54,843)

(SOLVE PROBLEM NO: 7 & 8 OF ASSIGNMENT PROBLEMS AS REWORK)

Note:_____

ASSIGNMENT PROBLEMS

PROBLEM 1: The following is the summarized Balance Sheet of Alpha Ltd. as at 31st March, 2018:

Liabilities	(Rs. In lakhs)	Assets	(Rs.in lakhs)
Share Capital:		Fixed Assets:	
Equity shares of Rs.10 each	200.00	Land and buildings	100.00
9% Preference share fully paid up	40.00	Plant and machinery	321.00
Reserve and Surplus:		Furniture and fixture	22.00
General reserve	48.00	Vehicles	20.00
Profit and Loss	121.60	Investments	40.00
Secured loans:		Inventory	27.00
10% Debentures	20.00	Trade Receivables	19.60
12% Term loan	72.00	Cash and bank	41.60
Trade Payables	64.00		
Provision for taxation	25.60		
	591.20		**591.20**

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

Balances as on 1.4.2017 to the following accounts were as: Profit and Loss account Rs.43.20 lakhs, General reserve Rs.46 lakhs.

Alpha Ltd. desires to value goodwill. For the purpose of valuation of goodwill, the company requires you to calculate average capital employed. ***(A) (RTP M18) (ANS: AVERAGE CAPITAL EMPLOYED RS.361.40 LAKHS)***

PROBLEM 2: Balance Sheet of AP Ltd. as on 31st March, 2018: **(Rs. in Lakhs)**

Liabilities	Amount (Rs.)	Assets	Amount (Rs.)
Equity Shares of Rs. 10 each	9,000	Land & Building	5,120
8½% Preference Shares	2,000	Plant & Machinery	10,870
General Reserve	1,050	Furniture	2,700
Profit & Loss A/c	3,000	Vehicles	200
18% Term Loan	4,500	Inventory	700
Cash Credit	560	Trade receivables	450
Trade payables	200	Cash & Bank	2,340
Provision for taxation (net of advance tax)	100		
Proposed dividend: Equity Preference	 1,800 170		
	22,380		**22,380**

Other information:

Balance as on 1.4.17

Profit and Loss A/c	Rs.480 Lakhs
Reserve	Rs.450 Lakhs

Find out average capital employed of AP Ltd.

(A) (NEW SM) (ANS: AVERAGE CAPITAL EMPLOYED - RS.14, 475 LAKHS)

PROBLEM 3: (Calculation of goodwill by adjusting the past profits) The summarized Balance sheet of Peach Ltd. on 31st March, 2018 is as under:

Liabilities	Amount (Rs.)	Assets	Amount (Rs.)
2,00,000 Equity shares of Rs.10 each fully paid up	20,00,000	Goodwill	1,24,000
General Reserve	5,20,000	Land and Buildings	16,53,000
Profit and Loss A/c	2,32,000	Plant & Machinery	8,78,000
Trade payables	1,13,000	12% Non-trading Investments	50,000
Bank Overdraft	58,000	Inventory	95,000
Provision for taxation	68,000	Trade receivables	1,65,000
		Cash in hand	26,000
Total	**29,91,000**	**Total**	**29,91,000**

Additional information:

i) The profit, for the last three years is as follows:

2014-15 - Rs.1, 98,600, 2015-16 - Rs.2, 07,000, 2016-17 - Rs.2, 85,000

ii) The rate of income tax so far has been 40% and the above profits have been arrived at on the basis of such tax rate. For the accounting year 2017-18, the income tax rate should be taken at 30%.

iii) In the year 2014-2015, the company earned an extraordinary income of Rs.25,000 due to a special contract. In the year 2016-17, company suffered loss due to riots amounting to Rs.74,000.

iv) 12% Non-trading investments were purchased 1st October, 2015.

v) The company's shareholders, in their general meeting have passed a resolution sanctioning the directors an additional remuneration of Rs.20,000 per annum with effect from 01st april,2018.

vi) The company has secured a contract from which it can earn additional Rs.1,50,000 per annum for the next 4 years.

vii) The normal rate of return for the industry is 15%.

On the basis of above information, you are required to calculate the value of goodwill of Peach Ltd. at 4 years purchase of super profits if any earned by the company in the previous three accounting years. For calculation of Future Maintainable profits weighted average is to be taken. ***(A) (N17 - 8M)***

(ANS: CAPITAL EMPLOYED: RS.25,78,000; NRR: 10%; FUTURE MAINTAINABLE PROFITS: 3,96,550; VALUE OF GOODWILL: 39,400)

PROBLEM 4: The Balance Sheet of B Ltd. on 31st March, 2018 is as under:

Liabilities	Rs.	Assets	Rs.
50,000 shares of Rs. 100 each fully paid up	50,00,000	Goodwill	4,00,000
Bank overdraft	18,60,000	Land & Building	32,00,000
Trade Payables	21,10,000	Plant &Machinery	28,00,000
Provision for taxation	5,10,000	Inventory	32,00,000
P&L appropriation account	21,20,000	Trade receivables considered good	20,00,000
	1,16,00,000		**1,16,00,000**

In 2001, when the company started its activities the paid up capital was the same. The Profit/Loss (after taxation) for the last five years is as follows:

2013-2014: Loss (5,50,000), 2014-2015: Profit Rs. 9,82,000; 2015-2016: Profit Rs. 11,70,000, 2016-2017: Profit Rs. 14,50,000, 2017-2018: Profit Rs.17,00,000.

The loss in 2013-14 occurred due to prolonged strike. The income tax paid so far had been at the average rate of 40%, but it is likely to be 45% from 2018-19 onwards. 10% dividend in 2014-2015, 2015-2016 and 15% dividend in 2016-2017 and 2017-2018 has been paid. Market price of this share on 31st March, 2018 is Rs.125. With effect from 1st April, 2018, the Managing Directors remuneration will be Rs.8,00,000 instead of Rs.6,00,000. The company has secured a contract from which it can earn an additional Rs.4,00,000 per annum for the next five years. Calculate the value of goodwill at 3 years purchase of super profit. (For calculation of future maintainable profits weighted average is to be taken).

(A) (ANS: AVERAGE CAPITAL EMPLOYED - RS.66,20,000; NRR - 10% ; FUTURE MAINTAINABLE PROFITS - 14,36,600 ; VALUE OF GOODWILL - 23,23,800)

PROBLEM 5: The Balance Sheet of Steel Ltd. as on 31st March, 2018 is given below:

Liabilities		Amount	Assets	Amount
Share capital:			**Fixed assets:**	
Equity shares of Rs.10 each	6,00,000		Goodwill	70,000
Less: Calls in arrears (@ 2 for final call)	(20,000)	5,80,000	Machinery	3,00,000
7% Preferences shares of Rs.10 each fully Paid		3,00,000	Freehold Properties	4,50,000
Reserves and surplus:			Vehicles	1,00,000
General reserve		3,50,000	Furniture	50,000
Profit and loss account		1,50,000	Investments	2,00,000
Current liabilities:			**Current Assets:**	
Sundry creditors		3,00,000	Stock-in-trade	2,50,000
Bank loan		2,00,000	Sundry debtors	4,00,000
			Cash at bank	60,000
		18,80,000		**18,80,000**

Additional Information:

i) On 1.4.2015 a new furniture costing Rs. 20,000 was purchased and wrongly charged to revenue. No rectification has yet been made for the same. Depreciation charged on furniture is @ 10% on reducing balance system.

ii) Fixed assets are worth 15% above their book value.

iii) Stock is overvalued by 50,000 and 10% Debtors are doubtful.

iv) Of the investments, 10% is trade investment and the balance is non-trade investment. Trade investments are to be valued at 10% below cost. A uniform rate of dividend of 10% is earned on all investments.

v) Profits after tax are as follows:

Particulars	Amount
2015-16	2,50,000
2016-17	2,80,000
2017-18	3,30,000

vi) In a similar business normal return on capital employed is 20%.

You are required to calculate the value of goodwill on the basis of 2 years purchase of super profits based on the average profit of last 3 years, assuming tax rate of 50%.

(B)(CA FINAL RTP M12) (ANS: VALUE OF GOODWILL - RS.54,288)

PROBLEM 6: The summarized Balance Sheet of Rose Ltd. for the year ended on 31st March, 2016, 2017 and 2018 are as follows:

	(Rs. in thousands)		
Liabilities	**31.3.2016**	**31.3.2017**	**31.3.2018**
1,60,000 equity shares of Rs. 10 each, fully paid	1,600	1,600	1,600
General reserve	1,200	1,400	1,600
Profit and Loss account	140	160	240

Trade Payables	600	800	1,000
	3,540	**3,960**	**4,440**
Assets			
Goodwill	1,000	800	600
Tangible assets(net)	1,400	1,600	1,600
Inventory	1,000	1,200	1,400
Trade Receivables	20	160	440
Cash and cash equivalents	120	200	400
	3,540	**3,960**	**4,440**

Additional information:

i) Actual valuations were as under:

Tangible assets	1,800	2,000	2,200
Inventory	1,200	1,400	1,600
Net profit (including opening balance after writing off depreciation, goodwill, tax provision and transferred to general reserve)	420	620	820

ii) Capital employed in the business at market value at the beginning of 2015-16 was Rs.36,60,000 which included the cost of goodwill. The normal annual return on average capital employed in the line of business engaged by Rose Ltd. is 12.5%.

iii) The balance in the general reserve on 1st April, 2015 was Rs.10 lakhs.

iv) The goodwill shown on 31.3.2016 was purchased on 1.4.2015 for Rs.10 lakh and the balance in Profit and Loss account as on 01st April, 2015 was Rs.1,20,000.

v) Goodwill is to be valued at 5 year's purchase of Super profit (Simple average method).

You are required to compute the average capital employed in each year and find out the value of goodwill. ***(B) (MTP M18)***

(ANS: AVERAGE CAPITAL EMPLOYED - RS 36,00,000 LAKHS (31.3.2016), 36,50,000 (31.3.2017) ; 40,00,000 (31.3.2018); VALUE OF GOODWILL: RS.20,56,250)

PROBLEM 7: Find out Leverage effect on Goodwill in the following case:

(i)	Average capital employed (Equity Approach)	Rs.11,50,000
(ii)	Future maintainable profit on Equity fund (After tax)	Rs.1,80,000
(iii)	10% long term loan	Rs.4,50,000
(iv)	Tax Rate	40%
(v)	Normal rate of return:	
	On equity capital employed	15%
	On long-term capital employed	12%

(A) (N15 - 6M) (ANS: ADVERSE LEVERAGE EFFECT ON GOODWILL - RS.75,000)

PROBLEM 8: From the following find out the Leverage effect on Goodwill

(i)	Current cost of capital employed	Rs.12,48,000
(ii)	Profit earned after current cost adjustments	Rs. 2,20,000
(iii)	12% long term secured loan	Rs. 5,40,000
(iv)	Normal rate of return:	
	On equity capital employed	16.20%
	On long-term capital employed	14.25%

(A) (M18 - 5M) (ANS.: ADVERSE LEVERAGE EFFECT ON GOODWILL IS RS.1,00,571)

PRINTED SOLUTIONS TO SOME SELECTIVE PROBLEMS

PROBLEM NUMBERS TO WHICH SOLUTIONS ARE PROVIDED: 2, 3

PROBLEM NO: 2

Computation of capital employed

Particulars				(Rs. in lakhs)
		31.3.17		31.3.18
Total Assets as per Balance Sheet		3800		4040
Less: Non-trade Investments		(75)		(150)
		3725		3890
Less: Outside Liabilities:				
12% Debentures	200		200	
18% Term Loan	300		320	
Cash Credit	120		80	
Trade payables	70		60	
Tax Provision	30	720	40	700
Capital employed		3005		3190

Average capital employed = $\frac{30{,}05\,\text{Lakhs} + 31{,}90\,\text{Lakhs}}{2}$ = **Rs. 3097.5 Lakhs.**

PROBLEM NO: 3

Past profits of PPX Ltd. showed an increasing trend excepting in year 2018. 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 and W.D.V method of depreciation, 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.	Effect of W.D.V Depreciation	Profits after elimination of the effect of change in Accounting policies
2014	21,70	+ 4,60	– 4,90	12,20
2015	22,50	+ 3,50	– 3,95	22,05
2016	23,70	+ 1,50	– 4,25	20,95
2017	24,50	–20	– 2,90	21,40
2018	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 2014. So a simple average may be taken of the last 4 years profits to arrive at the future maintainable profits:

Future Maintainable Profit (Rs.000) = $\frac{22{,}05 + 20{,}95 + 21{,}40 + 21{,}10}{4} = 21{,}37.50$

Working Note: Effect of LIFO Valuation

2014	Increase in Inventory as per FIFO valuation	6,00
	Less: Increase in Inventory per LIFO valuation	(1,40)
	Reduction in profit	4,60
2015	Increase in Inventory as per FIFO valuation	3,20
	Less: Increase in Inventory as per LIFO valuation	(6,70)
	Increase in profit	3,50
2016	Decrease in Inventory as per FIFO valuation	10,30
	Less: Decrease in Inventory as per LIFO valuation	(8,80)
	Increase in profit	1,50
2017	Opening Inventory as per FIFO valuation	38,90
	Less: Opening Inventory as per LIFO valuation	(39,10)
	Reduction in profit	20

THE END