

PAPER – 1 : ADVANCED ACCOUNTING

Answer all questions.

Working notes should form part of the answer.

Question 1

The following is the extract from the Balance Sheets of Popular Ltd.:

Liabilities	As at 31.3.2004 Rs. in lakhs	As at 31.3.2005 Rs. in lakhs	Assets	As at 31.3.2004 Rs. in lakhs	As at 31.3.2005 Rs. in lakhs
Share capital	500	500	Fixed assets	550	650
General reserve	400	425	10% investment	250	250
Profit and Loss account	60	90	Stock	260	300
18% term loan	180	165	Debtors	170	110
Sundry creditors	35	45	Cash at bank	46	45
Provision for tax	11	13	Fictitious assets	10	8
Proposed dividend	<u>100</u>	<u>125</u>			
	<u>1,286</u>	<u>1,363</u>		<u>1,286</u>	<u>1,363</u>

Additional information:

- Replacement values of Fixed assets were Rs.1,100 lakhs on 31.3.04 and Rs.1,250 lakhs on 31.3.2005 respectively.
- Rate of depreciation adopted on Fixed assets was 5% p.a.
- 50% of the stock is to be valued at 120% of its book value.
- 50% of investments were trade investments.
- Debtors on 31st March, 2005 included foreign debtors of \$35,000 recorded in the books at Rs.35 per U.S. Dollar. The closing exchange rate was \$ 1= Rs.39.
- Creditors on 31st March, 2005 included foreign creditors of \$60,000 recorded in the books at \$ 1 = Rs.33. The closing exchange rate was \$ 1 = Rs.39.
- Profits for the year 2004-05 included Rs.60 lakhs of government subsidy which was not likely to recur.
- Rs.125 lakhs of Research and Development expenditure was written off to the Profit and Loss Account in the current year. This expenditure was not likely to recur.
- Future maintainable profits (pre-tax) are likely to be higher by 10%.
- Tax rate during 2004-05 was 50%, effective future tax rate will be 40%.

(xi) Normal rate of return expected is 15%.

One of the directors of the company Arvind, fears that the company does not enjoy a goodwill in the prevalent market circumstances.

Critically examine this and establish whether Popular Co. has or has not any goodwill.

If your answers were positive on the existence of goodwill, show the leverage effect it has on the company's result.

Industry average return was 12% on long-term funds and 15% on equity funds. (16 Marks)

Answer

1. Calculation of Capital employed (CE)	Rs. in lakhs	
	As on 31.3.04	As on 31.3.05
Replacement Cost of Fixed Assets	1100.00	1250.00
Trade Investment (50%)	125.00	125.00
Current cost of stock		
$130 + 130 \times \frac{120}{100}$	286.00	
$150 + 150 \times \frac{120}{100}$		330.00
Debtors	170.00	111.40
Cash-at-Bank	<u>46.00</u>	<u>45.00</u>
Total (A)	<u>1727.00</u>	<u>1861.40</u>
Less: Outside Liabilities		
18% term loan	180.00	165.00
Sundry creditors	35.00	48.60
Provision for tax	<u>11.00</u>	<u>13.00</u>
Total (B)	<u>226.00</u>	<u>226.60</u>
Capital employed (A-B)	<u>1501.00</u>	<u>1634.80</u>
Average Capital employed at current value = $\frac{\text{CE as on 31.3.2004} + \text{CE as on 31.3.2005}}{2}$		
	$= \frac{1501 + 1634.80}{2} = 1567.90 \text{ Lakhs}^*$	

* Average capital employed can also be calculated in the following manner:

Closing capital employed as on 31.3.2005	Rs. 1,634.80 lakhs
Less: $\frac{1}{2}$ of actual post tax profit for 2004-2005	<u>Rs. 90.00 lakhs</u>
Average capital employed	<u>Rs. 1,544.80 lakhs</u>

2.	Future Maintainable Profit		Rs. in Lakhs
	Increase in General Reserve	25	
	Increase in Profit and Loss Account	30	
	Proposed Dividends	<u>125</u>	
	Profit After Tax	<u>180</u>	
	Pre-Tax Profit = $\frac{180}{1 - 0.5}$		360
	Less: Fictitious Assets written off (10 – 8)	2.00	
	Non-Trading investment income (10% of Rs.125)	12.50	
	Subsidy	60.00	
	Exchange Loss on creditors [0.6 lakhs × (39-33)]	3.60	
	Additional Depreciation on increase in value of Fixed Assets (current year) $(1250 - 650 = 600 \times \frac{5}{100})$ i.e.,	<u>30.00</u>	<u>108.10</u>
			251.90
	Add: Exchange Gain on Debtors [0.35 lakhs × (39-35)]	1.40	
	Research and development expenses written off	125.00	
	Stock Adjustment (30-26)	<u>4.00</u>	<u>130.40</u>
			382.30
	Add: Expected increase of 10%		<u>38.23</u>
	Future Maintainable Profit before Tax		420.53
	Less: Tax @ 40% (40% of Rs.420.53)		<u>168.21</u>
	Future Maintainable Profit		<u>252.32</u>
3.	Valuation of Goodwill		Rs. in lakhs
(i)	According to Capitalisation of Future Maintainable Profit Method		
	Capitalised value of Future Maintainable Profit		
	$= \frac{256.28}{15} \times 100$		1,682.13
	Less: Average capital employed		<u>1567.90</u>
	Value of Goodwill		<u>114.23</u>
	Or		

(ii) According to Capitalisation of Super Profit Method	Rs. in lakhs
Future Maintainable Profit	252.32
Less: Normal Profit @ 15% on average capital employed (1567.90 × 15%)	<u>235.19</u>
Super Profit	<u>17.13</u>
Capitalised value of super profit $\frac{17.13}{15} \times 100$ i.e. Goodwill	114.2

Goodwill exists, hence director's fear is not valid.

Leverage Effect on Goodwill	Rs. in lakhs
Future Maintainable Profit on equity fund	252.32
Future Maintainable Profit on Long-term Trading Capital employed	
Future Maintainable Profit After Tax	252.32
Add: Interest on Long-term Loan (Term Loan)	
(After considering Tax) $165 \times 18\% = 29.7 \times \frac{50}{100}$	<u>14.85</u>
	267.17
Average capital employed (Equity approach)	1567.90
Add: 18% Term Loan $(180+165)/2$	<u>172.50</u>
Average capital employed (Long-term Fund approach)	<u>1740.40</u>

Value of Goodwill

(A) Equity Approach	
Capitalised value of Future Maintainable Profit = $\frac{252.32}{15} \times 100 =$	1682.13
Less: Average capital employed	<u>1567.90</u>
Value of Goodwill	<u>114.23</u>
(B) Long-Term Fund Approach	
Capitalised value of Future Maintainable Profit = $\frac{267.17}{12} \times 100 =$	2226.42
Less: Average capital employed	<u>1740.40</u>
Value of Goodwill	<u>486.02</u>

Comments on Leverage effect of Goodwill:

Adverse Leverage effect on goodwill is 371.79 lakhs (i.e., Rs.486.02-114.23). In other words, Leverage Ratio of Popular Ltd. is low as compared to industry for which its goodwill value has been reduced when calculated with reference to equity fund as compared to the value arrived at with reference to long term fund.

Working Notes:

	Rs. in lakhs
(1) Stock adjustment	
(i) Excess current cost of closing stock over its Historical cost (330 – 300)	30.00
(ii) Excess current cost of opening stock over its Historical cost (286-260)	<u>26.00</u>
(iii) Difference [(i– ii)]	<u>4.00</u>
(2) Debtors' adjustment	
(i) Value of foreign exchange debtors at the closing exchange rate (\$35,000×39)	13.65
(ii) Value of foreign exchange debtors at the original exchange rate (\$35,000×35)	<u>12.25</u>
(iii) Difference [(i) – (ii)]	<u>1.40</u>
(3) Creditors' adjustment	
(i) Value of foreign exchange creditors at the closing exchange rate (\$60,000×39)	23.40
(ii) Value of foreign exchange creditors at the original exchange rate(\$60,000×33)	<u>19.80</u>
(iii) Difference [(i) – (ii)]	<u>3.60</u>

Question 2

The summarized Balance sheets of X Ltd. and its subsidiary Y Ltd. as at 31.3.2005 were as follows:

Liabilities	X Ltd. Rs.	Y Ltd. Rs.	Assets	X Ltd. Rs.	Y Ltd. Rs.
Share capital (Share of Rs.10 each)	50,00,000	10,00,000	Fixed assets	60,00,000	18,00,000
			Investment in Y Ltd. (60,000 shares)	6,00,000	---
General reserves	50,00,000	20,00,000	Sundry debtors	35,00,000	5,00,000
Profit and Loss account	20,00,000	15,00,000	Inventories	30,00,000	25,00,000
Secured loan	20,00,000	2,50,000	Cash and bank	39,00,000	2,00,000
Current liabilities	<u>30,00,000</u>	<u>2,50,000</u>			
	<u>1,70,00,000</u>	<u>50,00,000</u>		<u>1,70,00,000</u>	<u>50,00,000</u>

X Ltd. holds 60% of the paid-up capital of Y Ltd. and the balance is held by a foreign company.

A memorandum of understanding has been entered into with the foreign company by X Ltd. to the following effect:

- (i) The shares held by the foreign company will be sold to X Ltd. at a price per share to be calculated by capitalizing the yield at 15%. Yield, for this purpose, would mean 50% of the average of pre-tax profits for the last 3 years, which were Rs.12 lakhs, 18 lakhs and 24 lakhs respectively. (Average tax rate was 40%).
- (ii) The actual cost of shares to the foreign company was Rs.4,40,000 only. Gains accruing to the foreign company are taxable at 20%. The tax payable will be deducted from the sale proceeds and paid to government by X. 50% of the consideration (after payment of tax) will be remitted to the foreign company by X Ltd. and also any cash for fractional shares allotted.
- (iii) For the balance of consideration, X Ltd. would issue its shares at their intrinsic value.

It was also decided that X Ltd. would absorb Y Ltd. Simultaneously by writing down the Fixed assets of Y Ltd. by 10%. The Balance Sheet figures included a sum of Rs.1,00,000 due by Y Ltd. to X Ltd. and stock of X Ltd. included stock of Rs.1,50,000 purchased from Y Ltd., who sold them at cost plus 20%.

The entire arrangement was approved and put through by all concern effective from 1.4.2005.

You are required to indicate how the above arrangements will be recorded in the books of X Ltd. and also prepare a Balance Sheet after absorption of Y Ltd. Workings should form part of your answer. (16 Marks)

Answer

		X Ltd.			
		Balance Sheet as at 1 st April, 2005			
Liabilities		Amount (Rs.)	Assets		Amount (Rs.)
Share Capital:					
Shares	5,00,000		Fixed Assets	78,00,000	
Shares issued in lieu of purchase consideration	<u>33,466</u>		Less :Revaluation loss	<u>1,80,000</u>	76,20,000
(Shares of Rs.10 each)	5,33,466	53,34,660	Sundry Debtors (35,00,000+5,00,000)	40,00,000	
General Reserve		50,00,000	Less: Mutual Debts	<u>1,00,000</u>	39,00,000
Capital Reserve		13,20,000	Inventories (30,00,000+25,00,000)	55,00,000	
Profit and Loss Account	20,00,000				
Less: unrealized profit on stock	<u>25,000</u>	19,75,000			
Securities Premium (33,466×20)		6,69,320	Less: Unrealised profit on stock	<u>25,000</u>	54,75,000
Secured Loans (20,00,000 + 2,50,000)		22,50,000	Cash at Bank		27,03,980

Current Liabilities			
(30,00,000 +			
2,50,000)	32,50,000		
Less: Mutual Debts	<u>1,00,000</u>	<u>31,50,000</u>	
		<u>1,96,98,980</u>	<u>1,96,98,980</u>

Working Notes:-

(1) Yield of Y Ltd.

$$\text{Average of Pre Tax Profit} = \frac{12 + 18 + 24}{3} = \text{Rs.18 lakhs}^*$$

$$\text{Yield} = 18 \times \frac{50}{100} = \text{Rs.9 lakhs}$$

(2) Price per share of Y Ltd:-

$$\text{Capitalised value of yield of Y Ltd.} = \frac{9 \text{ lakhs}}{15} \times 100 = 60 \text{ lakhs.}$$

$$\text{No. of shares} = 1,00,000$$

$$\text{Price per share} = \frac{60 \text{ lakhs}}{1 \text{ lakh}} = \text{Rs.60 per share}$$

(3) Purchase consideration for 40% of share capital of Y Ltd.

$$= 1,00,000 \times 60 \times \frac{40}{100} = \text{Rs.24,00,000}$$

(4) Calculation of intrinsic value of shares of X Ltd.

Rs.

Total Assets excluding Investments in Y Ltd. 1,64,00,000

Value of Investment $60,000 \times 60$ 36,00,000

2,00,00,000

Less: Outside Liabilities:

Secured Loan 20,00,000

Current Liabilities 30,00,000 50,00,000

Net Assets 1,50,00,000

$$\text{Intrinsic value per share} = \frac{\text{Net Assets}}{\text{No. of Shares}}$$

$$= \frac{\text{Rs.1,50,00,000}}{5,00,000} = \text{Rs.30 per share}$$

* By setting the trend, weighted average profit can also be calculated.

(5) Discharge of purchase consideration by X Ltd.

	Equity share capital	Cash	Total
	Rs.	Rs.	Rs.
(i) Payment of Tax $(24 - 4.40) \times \frac{20}{100} =$	---	3,92,000	3,92,000
(ii) Issue of shares to foreign company [50% of $(24 - 3.92) = 10.04$ lakhs No. of shares issued by X Ltd. $\frac{10,04,000}{30} = 33,466.6666$ shares Value of shares capital $= 33,466 \times 30 =$	10,03,980	---	10,03,980
(iii) Cash Payment [50% of $(24 - 3.92) =$ 10.04 lakhs	---	10,04,000	10,04,000
(iv) Cash for fractional shares $= 0.6666 \times 30$	---	20	20
Total	<u>10,03,980</u>	<u>13,96,020</u>	<u>24,00,000</u>

(6) Calculation for Goodwill/Capital Reserve to X Ltd.

		Rs.
Total of Assets as per Balance Sheet of Y Ltd.		50,00,000
Less: 10% Reduction in the value of Fixed Assets $(\frac{10}{100} \times 18,00,000)$		<u>1,80,0000</u>
		48,20,000
Less: Secured Loan	2,50,000	
Current Liabilities	<u>2,50,000</u>	<u>5,00,000</u>
Net Assets		43,20,000
Less: Purchase consideration (outside shareholders)		<u>24,00,000</u>
		19,20,000
Less: Investment in Y Ltd. as per Balance Sheet of X Ltd.		<u>6,00,000</u>
Capital Reserve		<u>13,20,000</u>

- (7) Cash and Bank Balance of X Ltd. after acquisition of shares

	Rs.
Opening Balance (X Ltd.)	39,00,000
Cash and Bank Balance of Y Ltd.	<u>2,00,000</u>
	41,00,000
Less: Remittance to the foreign company	<u>10,04,020</u>
	30,95,980
Less: T.D.S. paid to Government	<u>3,92,000</u>
	<u>27,03,980</u>

- (8) Unrealised profit included in stock of X Ltd. =
- $1,50,000 \times \frac{20}{120} = \text{Rs.} 25,000$

Question 3

- (a) A company had imported raw materials worth US Dollars 6,00,000 on 5th January, 2005, when the exchange rate was Rs.43 per US Dollar. The company had recorded the transaction in the books at the above mentioned rate. The payment for the import transaction was made on 5th April, 2005 when the exchange rate was Rs.47 per US Dollar. However, on 31st March, 2005, the rate of exchange was Rs.48 per US Dollar. The company passed an entry on 31st March, 2005 adjusting the cost of raw materials consumed for the difference between Rs.47 and Rs.43 per US Dollar.

In the background of the relevant accounting standard, is the company's accounting treatment correct? Discuss.

- (b) A private limited company manufacturing fancy terry towels had valued its closing stock of inventories of finished goods at the realisable value, inclusive of profit and the export cash incentives. Firm contracts had been received and goods were packed for export, but the ownership in these goods had not been transferred to the foreign buyers.

Comment on the valuation of the stocks by the company.

- (c) A company with a turnover of Rs.250 crores and an annual advertising budget of Rs.2 crore had taken up the marketing of a new product. It was estimated that the company would have a turnover of Rs. 25 crores from the new product. The company had debited to its Profit and Loss account the total expenditure of Rs.2 crore incurred on extensive special initial advertisement campaign for the new product.

Is the procedure adopted by the company correct?

- (d) A company deals in petroleum products. The sale price of petrol is fixed by the government. After the Balance Sheet date, but before the finalisation of the company's accounts, the government unexpectedly increased the price retrospectively. Can the company account for additional revenue at the close of the year? Discuss.

(4x4=16 Marks)

Answer

- (a) As per AS 11 (revised 2003), 'The Effects of Changes in Foreign Exchange Rates', monetary items denominated in a foreign currency should be reported using the closing rate at each balance sheet date. The effect of exchange difference should be taken into profit and loss account. Sundry creditors is a monetary item, hence should be valued at the closing rate i.e, Rs.48 at 31st March, 2005 irrespective of the payment for the same subsequently at lower rate in the next financial year. The difference of Rs.5 (48-43) per US dollar should be shown as an exchange loss in the profit and loss account for the year ended 31st March, 2005 and is not to be adjusted against the cost of raw- materials. In the subsequent year, the company would record an exchange gain of Re.1 per US dollar, i.e., the difference between Rs.48 and Rs.47 per US dollar. Hence, the accounting treatment adopted by the company is incorrect.

- (b) Accounting Standard 2 "Valuation of Inventories" states that inventories should be valued at lower of historical cost and net realisable value. AS 9 on "Revenue Recognition" states, "at certain stages in specific industries, such as when agricultural crops have been harvested or mineral ores have been extracted, performance may be substantially complete prior to the execution of the transaction generating revenue. In such cases, when sale is assured under forward contract or a government guarantee or when market exists and there is a negligible risk of failure to sell, the goods invoiced are often valued at Net-realisable value."

Terry Towels do not fall in the category of agricultural crops or mineral ores. Accordingly, taking into account the facts stated, the closing stock of finished goods (Fancy terry towel) should have been valued at lower of cost and net-realisable value and not at net realisable value. Further, export incentives are recorded only in the year the export sale takes place. Therefore, the policy adopted by the company for valuing its closing stock of inventories of finished goods is not correct.

- (c) According to paras 55 and 56 of AS 26 'Intangible Assets', "expenditure on an intangible item should be recognised as an expense when it is incurred unless it forms part of the cost of an intangible asset".

In the given case, advertisement expenditure of Rs. 2 crores had been taken up for the marketing of a new product which may provide future economic benefits to an enterprise by having a turnover of Rs.25 crores. Here, no intangible asset or other asset is acquired or created that can be recognised. Therefore, the accounting treatment by the company of debiting the entire advertising expenditure of Rs.2 crores to the Profit and Loss account of the year is correct.

- (d) According to para 8 of AS 4 (Revised 1995), the unexpected increase in sale price of petrol by the government after the balance sheet date cannot be regarded as an event occurring after the Balance Sheet date, which requires an adjustment at the Balance Sheet date, since it does not represent a condition present at the balance sheet date. The revenue should be recognized only in the subsequent year with proper disclosures. The retrospective increase in the petrol price should not be considered as a prior period

item, as per AS 5, because there was no error in the preparation of previous period's financial statements.

Question 4

- (a) P Limited is considering the acquisition of R Limited. The financial data at the time of acquisition being:

	P Limited	R Limited
Net profit after tax (Rs. in lakhs)	60	12
Number of shares (lakhs)	12	5
Earning per share (Rs.)	5	2.40
Market price per share (Rs.)	150	48
Price earning ratio	30	20

It is expected that the net profit after tax of the two companies would continue to be Rs.72 lakhs even after the amalgamation.

Explain the effect on EPS of the merged company under each of the following situations:

- P Ltd. offers to pay Rs.60 per share to the shareholders of R Ltd.
- P Ltd. offers to pay Rs.78 per share to the shareholders of R Ltd.

The amount in both cases is to be paid in the form of shares of P Ltd.

- (b) A company has a capital base of Rs.1 crore and has earned profits to the tune of Rs.11 lakhs. The Return on Investment (ROI) of the particular industry to which the company belongs is 12.5%. If the services of a particular executive are acquired by the company, it is expected that the profits will increase by Rs.2.5 lakhs over and above the target profit.

Determine the amount of maximum bid price for that particular executive and the maximum salary that could be offered to him.

- (c) The following information is available of a concern; calculate E.V.A.:

Debt capital 12%	Rs. 2,000 crores
Equity capital	Rs. 500 crores
Reserve and surplus	Rs. 7,500 crores
Capital employed	Rs. 10,000 crores
Risk-free rate	9%
Beta factor	1.05
Market rate of return	19%
Equity (market) risk premium	10%
Operating profit after tax	Rs.2,100 crores
Tax rate	30%

(10+6+4= 20 Marks)

Answer

- (a) (i) In this case, P Ltd. offers to pay Rs.60 per share.

The share exchange ratio would be $\frac{60}{150} = 0.4$

It means, P Ltd. would give 0.4 shares for every one share of R Ltd. In other words, P Ltd. would give 2 shares for 5 shares of R Ltd.

The total number of shares to be issued by P Ltd. to R Ltd.

$$= 5,00,000 \times 0.4 = 2,00,000 \text{ shares}$$

or

$$5,00,000 \times \frac{2}{5} = 2,00,000 \text{ shares}$$

Total number of shares of P Ltd. after acquisition of R Ltd.

$$= 12,00,000 + 2,00,000 = 14,00,000 \text{ shares}$$

Calculation of E.P.S. of the amalgamated company

$$= \frac{\text{Total Net Profit after Interest and Tax}}{\text{Total Number of shares}}$$

$$= \frac{72,00,000}{14,00,000} = \text{Rs.5.14 per share}$$

After amalgamation, The EPS of P Ltd., will improve from Rs.5 to Rs.5.14 whereas EPS of former shareholders of R Ltd would reduce from present 2.40 per share to $5.14 \times 0.4 = \text{Rs.2.056}$ per share after merger.

- (ii) In this case, P Ltd. offers Rs.78 per share to the shareholders of R Ltd.

The Exchange Ratio would be $\frac{78}{150} = 0.52$ shares of P Ltd. for each share of R Ltd.

In other words, P Ltd would give 52 shares for per 100 shares of R Ltd.

P Ltd would issue $5,00,000 \times 0.52 = 2,60,000$ shares to shareholders of R Ltd.

$$\text{E.P.S. of the Merged Company} = \frac{72,00,000}{12,00,000 + 2,60,000} = 4.93$$

After Merger, there is a dilution in the E.P.S., of P Ltd. from 5 to 4.93.

After Merger E.P.S. of former shareholders of R Ltd.

$$= 4.93 \times 0.52 = 2.56$$

There is a gain of Re. 0.16 in E.P.S. of merged company in comparison to E.P.S. of R Ltd. of Rs.2.40 before merger.

Comments:

Initial increase in and decrease in earnings per share are possible in both cases of Merger. Generally, the dilution in E.P.S. will occur wherever the Price Earnings ratio of acquired company calculated on the basis of price paid exceed the P/E ratio of acquired company and vice-versa.

In Situation (i) - The price offered by P Ltd. per share of R Ltd. is Rs.60 and E.P.S. of R Ltd. is 2.4, which would become the earnings of P Ltd. after merger.

Price Earning (P/E) Ratio of P Ltd. after merger = $\frac{60}{2.40} = 25$. It is lower than the P/E Ratio of P Ltd. before merger i.e., 30, the E.P.S. of P Ltd. after merger increases to Rs.5.14.

In Situation (ii) - The price earnings (P/E) ratio offered for Merger is $\frac{78}{2.4} = 32.5$ which is higher than P/E Ratio of P Ltd. before Merger. Hence, the E.P.S. of P Ltd after merger would get diluted.

(b) Capital Base	=	Rs.1,00,00,000
Actual Profit	=	Rs. 11,00,000
Target Profit @ 12.5%	=	Rs. 12,50,000

Expected Profit on employing the particular executive

$$= \text{Rs.}12,50,000 + 2,50,000 = \text{Rs.}15,00,000$$

Additional Profit = Expected Profit – Actual Profit

$$= 15,00,000 - 11,00,000 = \text{Rs.}4,00,000$$

Maximum bid price = $\frac{\text{Additional Profit}}{\text{Rate of Return on Investment}}$

$$= \frac{4,00,000}{12.5} \times 100 = \text{Rs.}32,00,000$$

Maximum salary that can be offered = 12.5% of Rs.32,00,000 i.e., 4,00,000

Maximum salary can be offered to that particular executive upto the amount of additional profit i.e., Rs.4,00,000.

(c) E.V.A. = NOPAT – COCE

NOPAT = Net Operating Profit after Tax

COCE = Cost of Capital Employed

COCE = Weighted Average Cost Of Capital $\times$ Average Capital Employed

$$= \text{WACC} \times \text{Capital Employed}$$

Debt Capital	Rs.2,000 crores
Equity capital 500 + 7,500	= Rs.8,000 crores
Capital employed	= 2,000+8,000 = Rs.10,000 crores
Debt to capital employed	= $\frac{2,000}{10,000} = 0.20$
Equity to Capital employed	= $\frac{8,000}{10,000} = 0.80$
Debt cost before Tax	12%
Less: Tax (30% of 12%)	<u>3.6%</u>
Debt cost after Tax	<u>8.4%</u>

According to Capital Asset Pricing Model (CAPM)

Cost of Equity Capital = Risk Free Rate + Beta × Equity Risk Premium

Or

$$\begin{aligned}
 &= \text{Risk Free Rate} + \text{Beta} (\text{Market Rate} - \text{Risk Free Rate}) \\
 &= 9 + 1.05 \times (19-9) \\
 &= 9 + 1.05 \times 10 = 19.5\%
 \end{aligned}$$

$$\begin{aligned}
 \text{WACC} &= \text{Equity to CE} \times \text{Cost of Equity capital} + \text{Debt to CE} \times \text{Cost of debt} \\
 &= 0.8 \times 19.5\% + 0.20 \times 8.40\% \\
 &= 15.60\% + 1.68\% = 17.28\%
 \end{aligned}$$

$$\begin{aligned}
 \text{COCE} &= \text{WACC} \times \text{Capital employed} \\
 &= 17.28\% \times 10,000 \text{ crores} = 1728 \text{ crores}
 \end{aligned}$$

$$\begin{aligned}
 \text{E.V.A.} &= \text{NOPAT} - \text{COCE} \\
 &= \text{Rs. } 2,100 - \text{Rs. } 1,728 = \text{Rs. } 372 \text{ crores}
 \end{aligned}$$

Question 5

- (a) Mohur Ltd. has equity capital of Rs.40,00,000 consisting of fully paid equity shares of Rs.10 each. The net profit for the year 2004-05 was Rs.60,00,000. It has also issued 36,000, 10% convertible debentures of Rs.50 each. Each debenture is convertible into five equity shares. The tax rate applicable is 30%. Compute the diluted earnings.

- (b) Find out the average capital employed of ND Ltd. from its Balance sheet as at 31st March, 2006:

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% Pref. 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	20.00	Investments	10.00
Secured loans:		Current Assets:	
16% debentures	5.00	Stock	6.75
16% Term loan	18.00	Sundry Debtors	4.90
Cash credit	13.30	Cash and bank	10.40
Current Liabilities and Provisions:		Preliminary expenses	0.50
Sundry creditors	2.70		
Provision for taxation	6.40		
Proposed dividend on:			
Equity shares	10.00		
Preference shares	<u>0.90</u>		
	<u>148.30</u>		<u>148.30</u>

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

Balances as on 1.4.2005 to the following accounts were:

Profit and Loss account Rs.8.70 lakhs, General reserve Rs.6.50 lakhs. (8+8 = 16 Marks)

Answer

- (a) Interest on Debentures @ 10% for the year
- $$36,000 \times 50 \times \frac{10}{100}$$
- = Rs.1,80,000
- Tax on interest @ 30%
- = Rs.54,000
- Diluted Earnings (Adjusted net profit)
- = (60,00,000 + 1,80,000 - 54,000)
- = Rs. 61,26,000

(b) Computation of Average Capital employed

	(Rs. in Lakhs)	
Total Assets as per Balance Sheet		148.30
Less: Preliminary Expenses	0.50	
Non-trade investments (20% of Rs. 10 lakhs)	<u>2.00</u>	<u>2.50</u>
		145.80
Less: Outside Liabilities:		
16% Debentures	5.00	
16% Term Loan	18.00	
Cash Credit	13.30	
Sundry Creditors	2.70	
Provision for Taxation	<u>6.40</u>	<u>45.40</u>
Capital Employed as on 31.03.2006		100.40
Less: $\frac{1}{2}$ of profit earned:		
Increase in reserve balance	5.50	
Increase in Profit & Loss A/c	11.30	
Proposed Dividend	<u>10.90</u>	
	27.70 X 50 %	<u>13.85</u>
Average capital employed		<u>86.55</u>

Question 6

The Balance Sheet of Golden and Silver Limited as on 31.3.2006 are given below:

Liabilities	Golden Ltd. (Rs.)	Silver Ltd. (Rs.)	Assets	Golden Ltd. (Rs.)	Silver Ltd. (Rs.)
Equity share capital	2,40,000	2,40,000	Fixed assets	88,000	1,68,000
General reserve	40,000	32,000	Investment	1,80,000	10,000
Profit and Loss account	24,000	39,000	Sundry debtors	12,000	30,000
Bills payable	4,000	10,000	Bills receivable	8,000	32,000
Sundry creditors	8,000	15,000	Stock in trade	20,000	80,000
			Cash at bank	<u>8,000</u>	<u>16,000</u>
	<u>3,16,000</u>	<u>3,36,000</u>		<u>3,16,000</u>	<u>3,36,000</u>

Note: Contingent liability of Golden Ltd.: Bills discounted not yet matured at Rs.5,000.

Additional information:

- (i) On 1.10.2003, Golden Ltd. acquired 16,000 shares of Rs.10 each at the rate of Rs.11 per share.
- (ii) Balances to General reserve and Profit and Loss account of Silver Ltd. stood on 1.4.2003 at Rs.60,000 and Rs.32,000 respectively.
- (iii) Dividends have been paid @ 10% for each of the years 2003-04 and 2004-05. Dividend for the year 2003-04 was paid out of the pre-acquisition profits. No dividend has been proposed for the year 2005-06 as yet and no provision need to be made in consolidated Balance Sheet. Golden Ltd. has credited all dividends received to profit and Loss account.
- (iv) On 1.3.2006, bonus shares were issued by Silver Ltd. at the rate of one fully paid share for every five held and effect has been given to that in the above accounts. The bonus was declared from general reserves from out of profits earned prior to 1.4.2003.
- (v) On 1.10.2003, Fixed assets was revalued at Rs.2,16,000, but no adjustment had been made in the books.
- (vi) Depreciation had been charged @ 10% p.a. on the book value as on 1.4.2003 (on straight line method), there being no addition or sale since then.
- (vii) Out of Current profits Rs.4,000 have been transferred to General reserve every year.
- (viii) Bills receivable of Golden Ltd. include Rs.4,000 bills accepted by Silver Ltd. Bills discounted by Golden Ltd., but not yet matured include Rs.3,000 accepted by Silver Ltd.
- (ix) Sundry creditors of Golden Ltd. include Rs.4,000 due to Silver Ltd. Sundry debtors of Silver Ltd. include Rs.8,000 due from Golden Ltd.
- (x) It is found that Golden Ltd. has remitted a cheque of Rs.4,000, which has not yet been received by Silver Ltd.

Prepare consolidated Balance Sheet as at 31.3.2006 of Golden Ltd. and its Subsidiary.

(16 Marks)

Answer

Golden Ltd and its Subsidiary Silver Ltd.
Consolidated Balance Sheet
as on 31st March, 2006

Liabilities	Amount Rs.	Assets	Amount Rs.
Share capital (24,000 shares of Rs.10 each)	2,40,000	Fixed Assets (1,68,000- 12,000+3,000)	88,000 <u>1,59,000</u>
Minority Interests	60,400		2,47,000

Capital Reserve	53,200	Investment	14,000
General Reserve	48,000	(4,000*+10,000)	
Consolidated P&L Account	28,400	Debtors	
Bills Payable	14,000	(12,000+30,000-4,000)	38,000
Less: Mutual indebtedness	<u>4,000</u>	Less: Mutual Debts	<u>4,000</u>
Sundry creditors	23,000	Bills Receivable	40,000
Less: Mutual indebtedness	<u>4,000</u>	Less: Mutual Debts	<u>4,000</u>
	19,000	Stock (20,000+80,000)	1,00,000
		Remittance in Transit	4,000
		Cash at Bank	
		(8,000+16,000)	<u>24,000</u>
	<u>4,59,000</u>		<u>4,59,000</u>

Note: Contingent Liability of Bills discounted not yet matured for payment Rs.2,000.

Working Notes:-

(i) Interest of Golden Ltd in Silver Ltd.	Rs.
Share capital of Silver Ltd. on 31.3.2006	2,40,000
Less: Issue of Bonus Shares ($\frac{1}{6}$ of Rs.2,40,000)	<u>40,000</u>
Share capital before Bonus issue	<u>2,00,000</u>
No. of Equity Shares before Bonus issue	$\frac{2,00,000}{10}$
No. of shares held by Golden Ltd.	16,000
Interest of Golden Ltd. in Silver Ltd	$\frac{16,000}{20,000} \times 100$
Minority shareholders' Interest	20%

(ii) Analysis of Profit of Silver Ltd.

	Rs.	Capital Profit Rs.	Revenue Reserve Rs.	Revenue Profit Rs.
General Reserve on 31.3.2006 (After Bonus issue)	32,000			
Add: Bonus issue	<u>40,000</u>			
Balance (before bonus issue)	<u>72,000</u>			

* Rs. 1,80,000 – (16,000 shares x Rs. 11)

General Reserve on 1.4.2003	60,000		
Less: Bonus issue	<u>40,000</u>	20,000	
Increase in General Reserve (Transfer of Rs.4000 p.a. for 3 years)			
(72,000 – 60,000)	<u>12,000</u>	2,000	10,000
Profit and Loss Account			
Increase in Profit after Dividend			
39,000 – 12,000 =	<u>27,000*</u>	4,500	22,500
Additional depreciation written back due to revaluation of fixed assets			3,000
(12,000 × $\frac{10}{100} \times 2.5$)		_____	_____
	<u>26,500</u>	<u>10,000</u>	<u>25,500</u>
Share of Golden Ltd. (80%)	21,200	8,000	20,400
Share of Minority Shareholders (20%)	<u>5,300</u>	<u>2,000</u>	<u>5,100</u>
	<u>26,500</u>	<u>10,000</u>	<u>25,500</u>

(iii) Loss on Revaluation has been calculated as follows:

	Rs.
Value of Assets on 1.4.2003 ($1,68,000 \times \frac{100}{70}$)	2,40,000
Less : Depreciation for 6 months ($2,40,000 \times \frac{10}{100} \times \frac{1}{2}$)	<u>12,000</u>
Valuation of Assets on 1.10.2003	2,28,000
Less: Re-valued value of Assets	<u>2,16,000</u>
Loss on Revaluation	<u>12,000</u>

* It has been assumed that Profit of Rs.27,000 after payment of dividend for the year 2004-2005, has been earned evenly in 3 years, (year 2003-04, 2004-05 and 2005-06) hence profit per year would be $\frac{27,000}{3}$ = Rs.9000. Half of the profit of Rs.9,000 for the year 2003-04 would be pre-acquisition (Capital Profit) and Remaining half i.e. Rs.4500 would be post-acquisition profit (Revenue profit).

(iv) Cost of Control

		Rs.
Cost of Investment in Silver Ltd.		1,76,000
Less: Dividend out of capital profit	16,000	
Less: Paid up value of investment (including Bonus Shares)		
$(1,60,000 + 1,60,000 \times \frac{1}{5})$	1,92,000	
Less: Capital Profit	<u>21,200</u>	<u>2,29,200</u>
Capital Reserve		<u>53,200</u>

(v) Minority Interest

Paid-up share capital (Including Bonus Shares)		
$(40,000 + 40,000 \times \frac{20}{100})$		48,000
Add: Share in Capital Profit	5,300	
Share in Revenue Reserve	2,000	
Share in Revenue Profit	<u>5,100</u>	<u>12,400</u>
		<u>60,400</u>

(vi) General Reserve

Balance in Golden Ltd.	40,000
Add: Share in Silver Ltd.	<u>8,000</u>
	<u>48,000</u>

(vii) Consolidated Profit and Loss Account

Balance in Golden Ltd.	24,000
Less: Dividend credited out of Pre-acquisition Profit (Capital Profit)	<u>16,000</u>
	8,000
Add: Share in Profit of Silver Ltd.	<u>20,400</u>
	<u>28,400</u>