## Paper – 20: Financial Analysis & Business Valuation

**Time Allowed:** 3 hours **Full Marks:** 100

**This paper contains 4 questions, representing two separate sections as prescribed under syllabus 2012. All questions are compulsory, subject to the specific guidance/ instructions stated against every question. All workings, wherever necessary, must form a part of your answer. Assumptions, if any, should be clearly stated.**

**Question No. 1.** (Answer **all** questions. Each question carries **10 marks**)

**1(a).** The extracts of Balance sheet and Income statement of M/s. Tineto Company over the last 3 years are as follows:

(₹ '000)

| Particulars | | 2011-12 | 2012-13 | 2013-14 |
|---|---|---|---|---|
| Current Assets: | | | | |
| Cash | | 561 | 387 | 202 |
| Receivables | | 1,963 | 2,870 | 4,051 |
| Inventories | | 2,031 | 2,613 | 3,287 |
| Total Current Assets | (A) | 4,555 | 5,870 | 7,540 |
| Non-current Assets: | | | | |
| Net fixed assets | (B) | 2,581 | 4,430 | 4,364 |
| | | | | |
| Total Assets | (A+B) | 7,136 | 10,300 | 11,904 |
| | | | | |
| Current Liabilities: | | | | |
| Payables | | 1,862 | 2,944 | 3,613 |
| Accruals | | 301 | 516 | 587 |
| Bank loan | | 250 | 900 | 1,050 |
| Total Current Liabilities | (C) | 2,413 | 4,360 | 5,250 |
| Non-current Liabilities: | | | | |
| Long-term debt | (D) | 500 | 1,000 | 950 |
| Shareholders' Fund: | | | | |
| Shareholders' equity | (E) | 4,223 | 4,940 | 5,704 |
| | | | | |
| Total Liabilities and Equity | (C+D+E) | 7,136 | 10,300 | 11,904 |
| | | | | |
| Sales | | 11,863 | 14,952 | 16,349 |
| Cost of goods sold | | 8,537 | 11,124 | 12,016 |
| Selling, general and administrative expenses | | 2,349 | 2,659 | 2,993 |
| Profit before tax | | 977 | 1,169 | 1,340 |
| Taxes | | 390 | 452 | 576 |
| Profit after tax | | 587 | 717 | 764 |

You are required to prepare Common Size Balance Sheet and Common Size Income Statement for the years 2011-12 to 2013-14 and analyse the results. **[5+5]**

**1(b).** A company is reviewing an investment proposal in a project involving a capital outlay of ₹ 90,00,000 in plant and machinery. The project would have a life of 5 years at the end of which the plant and machinery could fetch a resale value of ₹30,00,000. Further the project would also need a working capital of ₹12,50,000 which would be built during the year 1 and to be released from the project at the end of year 5. The project is expected to yield the following cash profits:

| Year | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Cash profit (₹ lakhs) | 35 | 30 | 25 | 22 | 20 |

25% depreciation for plant and machinery is available on WDV basis as Income-tax exemption. Assume that the corporate tax is paid one year in arrear of the periods to which it relates and the first year's depreciation allowance, would be claimed against the profits of year 1.

The Assistant Management Accountant has calculated NPV of the project using the company's corporate target of 20% pre-tax rate of return and has ignored the taxation effect in the cash flows.

As the newly recruited Management Accountant, you realize that the project's cash flows should incorporate the effects of tax. The corporate tax is expected to be 35% during the life of the project and thus the company's rate of return post-tax is 13% (65% of 20%).

Your Assistant is surprised to note the difference between discounting the pre-tax cash flows at a pretax DCF rate and post-tax cash flows at a post-tax rate.

Required:

(i) Calculate the NPV of the project as the Assistant Management Accountant would have calculated it,
(ii) Re-calculate the NPV of the project taking tax into consideration,
(iii) Comment on the desirability of the project vis-a-vis your findings in (ii). **[4+4+2]**

**Question No. 2** (Answer **any two** questions. Each question carries **15 marks**)

**2(a).** From the following Balance Sheet (extract) and Income Statement (extract) of X Ltd. evaluate its financial position and performance with reference to the standard value of ratio.

Balance Sheet (Extract)
As at 31.03.14

| Equities & Liabilities | ₹ | Assets | ₹ |
|---|---|---|---|
| Shareholders' Fund: | | Non-current Assets: | |
| Equity Share of ₹ 10 each | 10,00,000 | Fixed Assets | 32,50,000 |
| Reserve | 22,50,000 | Inventory | 20,00,000 |

| Non-current Liabilities: | | | |
|---|---|---|---|
| Long term Debt | 12,50,000 | Current Assets: | |
| Current Liabilities: | | Receivable | 15,00,000 |
| Bank Overdraft | 15,00,000 | Cash | 5,00,000 |
| Creditors | 10,00,000 | Prepaid expenses | 2,50,000 |
| Provision | 5,00,000 | | |
| | 75,00,000 | | 75,00,000 |

Income Statement (Extract)
For the year ended 31.03.14

| | | ₹ |
|---|---|---|
| | Sales | 95,00,000 |
| Less | Cost of goods sold | 72,00,000 |
| | Gross Profit | 23,00,000 |
| Less | Operating expenses | 7,90,000 |
| | Earnings before interest & Tax (EBIT) | 15,10,000 |
| Less | Interest | 5,00,000 |
| | Earnings before Tax (EBT) | 10,10,000 |
| Less | Tax | 5,00,000 |
| | Net Profit / Earnings after Tax | 5,10,000 |
| Less | Dividend | 1,80,000 |
| | Retained Profit | 3,30,000 |

Standard values of the ratios are as follows:

| | Standard Ratio |
|---|---|
| 1. Current Ratio | 1.5 |
| 2. Liquid Ratio | 0.8 |
| 3. Debt-equity Ratio | 1.5 |
| 4. Interest Coverage | 3.6 times |
| 5. Inventory turnover | 4 times |
| 6. Debt Collection period | 60 days |
| 7. Total Asset Turnover | 1 time |
| 8. Net margin on sales | 6% |
| 9. Return on Investment | 10% |
| 10. Return on Equity | 12% |

Answer the following questions:

(i) Calculate the ratios which are relevant for the analysis of liquidity, profitability. Also calculate the Debt-equity ratio as a part of Capital Structure ratio and Interest coverage ratio as a part of Coverage ratio.

(ii) Analyse and comment of the position of the company as compared to the standard on the basis of those ratios which are calculated in point (i). **[10+5]**

**2(b)(i).** The selected financial data for the companies, namely P, Q and R for the year ended 31st March, 2014 are as follows:

| Particulars | P | Q | R |
|---|---|---|---|
| Variable expenses as a percentage of sales | 66.67 | 75 | 50 |
| Interest expenses (₹) | 200 | 300 | 1,000 |
| Degree of operating leverage (DOL) | 5 | 6 | 6 |
| Degree of financial leverage (DFL) | 3 | 4 | 2 |
| Income-tax rate | 0.30 | 0.30 | 0.30 |

1. Prepare income statements for P, Q and R companies.
2. Comment on the financial position and structure of these companies. **[3+2]**

**2(b)(ii).** The result of Dynamic Ltd. for the year 2012-13 and 2013-14 were as under:

| | 2012-13 (₹) | 2013-14 (₹) |
|---|---|---|
| Direct Materials | 1,25,000 | 1,65,000 |
| Direct labour | 75,000 | 82,500 |
| Variable overheads | 15,000 | 17,500 |
| Fixed overheads | 25,000 | 30,000 |
| Net Profit | 10,000 | 21,250 |
| Sales | 2,50,000 | 3,16,250 |

Prices of materials, wages and overheads had an increase of 10% in 2013-14 as compared to 2012-13. Selling price had also gone up by 10%.

Prepare a statement showing how much each factor has contributed to variance in Net Profit. **[10]**

**2(c)(i).** From the following informations, calculate the cash from operations after analysing each of the following items in relation to the cash flow analysis:

| | Balances as on | |
|---|---|---|
| | 31st March, 2013 (₹) | 31st March, 2014 (₹) |
| 1. Stocks | 12,000 | 14,000 |
| 2. Debtors | 12,000 | 15,000 |
| 3. Creditors | 5,000 | 9,000 |
| 4. Bills Receivable | 5,000 | 8,000 |
| 5. Outstanding Expenses | 4,000 | 7,500 |
| 6. Bills Payable | 4,000 | 2,000 |
| 7. Prepaid Expenses | 2,000 | 1,000 |

Provided that operating profit before working capital changes are ₹ 3,000. **[5]**

**2(c)(ii).** From the following Profit and Loss Account of AB Limited, prepare (A) Gross Value Added Statement, and [B) show the Reconciliation between Gross Value Added and Profit before Taxation:

Profit and Loss Account (Extracts) for the year ended 31st March, 2014

| Particulars | (₹ in lakhs) | (₹ in lakhs) |
|---|---|---|
| Income: | | |
| Sales | | 800 |
| Other Income | | 50 |
| | | 850 |
| Expenditure: | | |
| Production and Operational Expenses | 600 | |
| Administrative Expenses | 30 | |
| Interest and Other Charges | 30 | |
| Depreciation | 20 | 680 |
| Profit before Tax | | 170 |
| Provision for Tax | | 30 |
| | | 140 |
| Balance as per last Balance Sheet | | 20 |
| | | 160 |
| Transferred to: | | |
| General Reserve | | 80 |
| Proposed Dividend | | 30 |
| Surplus carried to Balance Sheet | | 50 |
| | | 160 |
| Break-up of some of the Expenditure is as follows: | | |
| Production and Operational Expenses: | | |
| Consumption of Raw Materials and | | 320 |
| Salaries, Wages and Bonus | | 60 |
| Cess and Local Taxes | | 20 |
| Other Manufacturing Expenses | | 200 |
| | | 600 |
| Administrative Expenses: | | |
| Audit Free | | 6 |
| Salaries and Commission to Directors | | 8 |
| Provision for Doubtful Debts | | 6 |
| Other Expenses | | 10 |
| | | 30 |
| Interest and other charges: | | |
| On Working capital Loans from bank | | 10 |
| On Fixed Loans from ICICI | | 15 |
| On Debentures | | 5 |
| | | 30 |

**[4+2]**

**2(c)(iii).** From the following informations, compute Price Earnings Ratio, Earning Yield Ratio, Dividend Yield Ratio and Market Price to Book Value Ratio with analytical aspects:

- Market price of an equity share: ₹ 225
- Net profit after interest, tax and preference dividend: ₹ 2,25,000
- Profit distributed as dividend: ₹ 1,35,000
- No. of Equity Shares: 10,000 @ ₹ 10 each
- Profit distributed as dividend: ₹ 1,35,000
- General Reserve: ₹ 3,00,000
- Profit & Loss Account: ₹ 2,00,000 **[4]**

**Question No. 3.** (Answer **all** questions. Each question carries **10 marks**)

**3 (a).** The following information is provided related to the acquiring Firm Black Ltd. and the target Firm White Ltd.

| Particulars | Black Ltd. | White Ltd. |
|---|---|---|
| Earnings after tax (₹) | 4000 lakhs | 800 lakhs |
| Number of shares outstanding | 400 lakhs | 200 lakhs |
| P/E ratio (times) | 20 | 10 |

Required:

(i) What is the swap Ratio based on current market prices?

(ii) What is the EPS of Black Ltd. after acquisition?

(iii) What is the expected market price per share of Black Ltd after acquisition assuming P/E ratio of Black Ltd. remains unchanged?

(iv) Determine the market value of the merged firm.

(v) Calculate gain/loss for shareholders of the two independent companies after acquisition. **[3+2+1+1+3]**

**3 (b).** Following information are available in respect of ABC Ltd. which is expected to grow at a higher rate for 4 years after which growth rate will stabilize at a lower level:

Base year information:

| Particulars | ₹in lakhs |
|---|---|
| Revenue | 20,000 |
| EBIT | 3,000 |
| Capital Expenditure | 2,800 |
| Depreciation | 2,000 |

Information for high growth and stable growth period are as follows:

| Particulars | High Growth | Stable Growth |
|---|---|---|
| Growth in Revenue & EBIT | 20% | 10% |
| Growth in capital expenditure and depreciation | 20% | Capital expenditure are offset by depreciation |
| Risk free rate | 10% | 9% |
| Equity beta | 1.15 | 1 |
| Market risk premium | 6% | 5% |
| Pre tax cost of debt | 13% | 12.86% |
| Debt equity ratio | 1:1 | 2:3 |

For all time, working capital is 30% of revenue and corporate tax rate is 35%.
What is the value of the firm? **[10]**

**Question No. 4.** (Answer **any two** questions. Each question carries **15 marks**)

**4 (a) (i).** Supreme Ltd. is comprised of only four major investment projects, details of which are as follows:

| Project | % of market value | Annual % return during last 5 years | Risk % of standard deviation | Correlation with the market |
|---|---|---|---|---|
| A | 30 | 10 | 15 | 0.55 |
| B | 15 | 18 | 20 | 0.75 |
| C | 29 | 15 | 14 | 0.84 |
| D | 26 | 13 | 18 | 0.62 |

The risk free rate is expected to be 6% per year, the market return is 15% per year and the standard deviation of market returns is 14%.

Assume that Supreme Ltd's shares are currently priced based upon the assumption that the last five years experience of returns will continue for the foreseeable future.
Evaluation whether or not the share price of Supreme Ltd. is undervalued/overvalued. **[7]**

**4 (a) (ii).** Black Ltd., a lessee, acquired a machinery on lease from White Ltd., (lessor) on January 1, 2013. The lease term covers the entire economic life of the machinery, i.e., 3 years. The F.V. of the machinery on January 1, 2013 is ₹10.50 lakhs. The lease agreement requires the lessee to pay an amount of ₹4.50 lakhs p.a. beginning December 31, 2013. The lessee has guaranteed an RV of ₹34,200 on December 31, 2015 to the lessor. The lessor however estimates that the machinery will have a salvage value of only ₹30,000 on December 31, 2015. The implicit rate of interest is 15%, compute the value of machinery, to be recognized by the lessee, and also the finance charges, every year, on the basis of AS – 19. **[4+4]**

**4 (b).** The following abridged Balance Sheet as at 31.03.2013 pertains to Jupiter Ltd.

(₹ Lakhs)

| Equity & Liabilities | ₹ |
|---|---|

| | |
|---|---|
| (1) Shareholders' Funds: | |
| (a) Share Capital - Equity Share Capital | |
| (i) 180 Lakhs Shares of ₹10, fully paid up | 1,800 |
| (ii) 90 Lakhs Shares of ₹10, ₹8 paid up | 720 |
| (iii) 150 Lakhs Shares of ₹5, fully paid up | 750 |
| (b) Reserves & Surplus | 5,628 |
| (2) Non-Current Liabilities: | |
| Long Term Borrowings - Secured Loans | 4,500 |
| (3) Current Liabilities: | |
| (a) Other Current Liabilities | 1,242 |
| (b) Short Term Provisions | 960 |
| Total | 15,600 |
| Assets | |
| (1) Non-Current Assets: | |
| (a) Fixed Assets: | |
| (i) Tangible Assets | 11,166 |
| (ii) Intangible Assets - Goodwill | 420 |
| (b) Other Non-Current Assets | |
| - Miscellaneous Expenditure | 171 |
| (2) Current Assets: | |
| (a) Short Term Loans & Advances | 943 |
| (b) Other Current Assets | 2,900 |
| Total | 15,600 |

You are required to calculate the following for each one of three categories of Equity Shares appearing in the above mentioned Balance Sheet -

- Intrinsic Value on the basis of Book Values of Assets and Liabilities including Goodwill,
- Value per Share on the basis of Dividend Yield. Normal Rate of Dividend in the concerned Industry is 15%, whereas Jupiter Ltd has been paying 20% Dividend for the last four years and is expected to maintain it in the next few years, and
- Value per Share on the basis of EPS, For the year ended 31st March, 2013 the Company has earned ₹1,371 Lakhs as Profit after tax, which can be considered to be normal for the Company. Average EPS for a fully paid Share of ₹10 of a Company in the same Industry is ₹2. **[7+3+5]**

**4 (c) (i).** Milton Consulting Ltd. is a firm that specializes in offering management consulting services to software companies.

Milton Ltd. reported operating income (EBIT) of ₹306 lakh and net income of ₹135 lakh in the most recent year. However, the firms expenses include the cost of recruiting new consultants and the cost of training which amounts to ₹60 lakh. A consultant who joins Milton Consulting Ltd. stays with the firm, on an average, for 4 years. Recruitment and training expenses are amortizable over 4 years immediately following the year in which they are incurred. Over the past 4 years the expenses are:

| Year | Training, Recruitment Expenses (₹in lakh) |
|---|---|
| Current | 60 |
| Year 1 | 48 |
| Year 2 | 45 |
| Year 3 | 36 |
| Year 4 | 30 |

Assuming a linear amortization schedule (over 4 years)

Estimate:

(1) The value of human capital asset and the amount of training and recruitment expenses amortization for this year.

(2) The adjustment to operating income. **[4+2]**

**4 (c) (ii).** A company has been making a machine to order for a customer but the customer has, however, since gone into liquidation and there are no prospects than any money will be obtained from the winding up of his company.

Cost incurred to-date in manufacturing the machine are ₹1,00,000 and progress payments of ₹30,000 have been received from the customer prior to the liquidation. The sales department has found another company willing to buy the machine for ₹68000 once it is completed. To complete the work, the following costs have to be incurred:

(1) Material – These have been bought at a Cost of ₹12000. They have no other use and if the machine is not finished, they would be sold as scrap for ₹4000.

(2) Further labour costs would be ₹16000. Labour is in short supply and if the machine is not finished, the workforce would be switched over to another job, which earns ₹60000 in revenue, and incurs direct costs (not including direct labour) of ₹24000 and absorbs (fixed) overhead of ₹16000.

(3) Consultancy fees ₹8000. If the work is not completed, the consultant's contract would be cancelled at a cost of ₹3000.

(4) General overheads of ₹16000 would be added to the cost of the additional work. Should the new customer's offer be accepted? Prepare a statement showing the economics of the proposition. **[9]**