# PAPER – 20: Financial Analysis and Business Valuation

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

**Section – A**

**Answer Question No. 1 which is compulsory**

**[2×6=12]**

1. (a) (i) During 2013, Arbic Toys, which began business in October of that year, purchased 10,000 units of its most popular toy at a cost of ₹10 per unit in October. In anticipation of heavy December sales, Arbic purchased 5,000 additional units in November at a cost of ₹11 per unit. During 2013, Arbic sold 12,000 units at a price of ₹15 per unit. Under the first in first out (FIFO) method, what is Arbic's cost of goods sold for 2013?

(ii) IA firm's sales, variable costs and fixed cost amount to ₹ 75,00,000, ₹ 42,00,000 and ₹6,00,000 respectively. It has borrowed ₹ 45,00,000 at 9% and its equity capital totals ₹55,00,000. What is the firm's ROI?

(iii) Assume that the following details are given for a company:

| | ₹ |
|---|---|
| Sales | 1,00,000 |
| Costs | 75,000 |
| Depreciation | 20,000 |
| Tax | 35% |
| Change in Net Working Capital | 1,000 |
| Change in Capital Spending | 10,000 |

Compute Free Cash Flows to Firm?

(iv) If value of A Ltd. is ₹ 50 lakhs, B Ltd. is 20 Lakhs and on merger their combined value is 90 lakhs and A Ltd. receives premium on merger 12 lakhs, then what is the synergy gain of B Ltd.?

(v) If a company has a P/E ratio of 20 and a ROE (Return on Equity) of 15% then the what is the Market Value to Book Value Ratio?

(vi) Bombay Cotton Mills Limited Ltd. makes a rights issue at ₹5 a share of one new share for Every four shares held. Before the issue, there were 10 million shares outstanding and the share price was ₹ 6. Based on the above information you are required to compute the value of one Right?

(b) State whether the following statements are true or false **[1×8=8]**

(i) Fair value of share is the average of Intrinsic value of the share and value of share based on the earnings.

(ii) Good will arises when a company takeover another for a value less than the fair value.

(iii) Exchange ratio of equity shares of merging firms is determined by their market price alone

(iv) According to basic valuation model, the value of a financial asset is present value of its expected future cash flows

(v) Free Cash flows to the firm and Free cash flows to equity are one and the same if the company does not have any debt.

(vi) Cash realized from sale of scrap is grouped under the category of cash from Investing activities in Cash flow statement.
(vii) If there are no fixed costs, the operating leverage value will be 1.
(viii) Return on Capital employed indicates the liquidity of a firm.

**Sec- B: Answer Any 5 Question from the following**

**2. (a) The following are the Balance Sheet of Maharaj Ltd. as on 31-03-12 and 31-03-13:**

| | (₹) 31-03-2012 | (₹) 31-03-2013 |
|---|---|---|
| Current Assets: | | |
| Cash and Bank Balance | 23,600 | 2,000 |
| Debtors | 41,800 | 38,000 |
| Inventory | 32,000 | 26,000 |
| Other Current Assets | 6,400 | 2,600 |
| (A) | 1,03,800 | 68,600 |
| Fixed Assets: | | |
| Land and Building | 54,000 | 34,000 |
| Plant and Machinery | 62,000 | 1,57,200 |
| Furniture | 5,800 | 9,600 |
| (B) | 1,21,800 | 2,00,800 |
| Long Term Investment (C) | 9,200 | 11,800 |
| Total Assets (A + B + C) | 2,34,800 | 2,81,200 |
| Current Liabilities (D) | 52,400 | 25,400 |
| Long-term debt (E) | 40,000 | 65,000 |
| Owner's Equity: | | |
| Equity share capital | 80,000 | 1,20,000 |
| Reserve and Surplus | 62,400 | 70,800 |
| (F) | 1,42,400 | 1,90,800 |
| Total Liabilities and Capital (D + E + F) | 2,34,800 | 2,81,200 |

**Prepare Comparative Balance Sheet and discuss its financial position [10]**

**(b) The following figures have been extracted from the records of a company:**

| Year | 2011 | 2012 |
|---|---|---|
| Sales ₹ | 1,50,000 | 2,70,000 |
| Cost of Goods Sold ₹ | 1,00,000 | 1,80,000 |
| Units Sold | 10,000 | 15,000 |

**Account for changes in profit due to changes in sales quantity, cost price and selling price [6]**

**3. The following figures have been extracted from the Books of X Limited for the year ended on 31.3.2004. You are required to prepare a cash flow statement.**

(i) Net profit before taking into account Income Tax and Income from law suits but after taking into Account the following items was ₹ 20 lakhs:
- Depreciation on Fixed Assets ₹ 5 lakhs.
- Discount on issue of Debentures written off ₹ 30,000
- Interest on Debentures paid ₹ 3,50,000

- **Books value of investments ₹ 3 lakhs (Sale of Investments for ₹ 3,20,000).**
- **Interest received on investments ₹ 60,000**
- **Compensation received ₹ 90,000 by the company in a suit field.**

**(ii) Income tax paid during the year ₹ 10,50,000**

**(iii) 15,000, 10% preference shares of ₹ 100 each were redeemed on 31.3.2004 at a premium of 5%. Further the company issued 50,000 equity shares of ₹ 10 each at a premium of 20% on 2.4.2003. Dividend on preference shares were paid at the time of redemption.**

**(iv) Dividends paid for the year 2002-2003 ₹ 5 lakhs and Interim dividend paid ₹ 3 lakhs for the year 2003-04.**

**(v) Land was purchased on 2.4.2003 for ₹ 2,40,000 for which the company issued 20,000 equity shares of ₹ 10 each at a premium of 20% to the land owner as consideration.**

**(vi) Current assets and Current liabilities in the beginning and at the end of the years were as detailed below:**

| | As on 31.3.2003 | As on 31.3.2004 |
|---|---|---|
| Stock | 12,00,000 | 13,18,000 |
| Sundry Debtors | 2,08,000 | 2,13,100 |
| Cash in hand | 1,96,300 | 35,300 |
| Bills receivable | 50,000 | 40,000 |
| Bills payable | 45,000 | 40,000 |
| Sundry Creditors | 1,66,000 | 1,71,300 |
| Outstanding expenses | 75,000 | 81,800 |

**[16]**

**4. (a) Exe Limited is a dealer in automobile components. While preparing the financial statements for the year ended 31.3.2001, it was discovered that a substantial portion of the record was missing. However, the accountant was able to gather the following data:**

| | ₹ | ₹ | | ₹ | ₹ |
|---|---|---|---|---|---|
| Share Capital | | | Fixed Assets | | |
| Authorised and subscribed: | | | Land | | 1,20,000 |
| 20,000 equity shares of ₹10 each, fully paid up | | 2,00,000 | Plant and Machinery at cost | ? | |
| Reserves and Surplus | | | Less Depreciation | ? | |
| General Reserve: | | | Current Assets | | |
| Balance on 1.4.2000 | 60,000 | | Stock | ? | |
| Add: Transfer during the year | ? | ? | Debtors | ? | |
| Secured Loans 15% loan | | ? | Cash and Bank | ? | ? |
| Current liabilities | | | | | |
| Creditors | ? | | | | |
| Provision for tax | ? | | | | |
| Proposed Dividend | ? | | | | |
| Total Current Liabilities | | 2,00,000 | | | |

**The following additional information is provided to you:**

| (i) | Current ratio | 2 Times |
|---|---|---|
| (ii) | Cash and bank | 30% of total current assets |
| (iii) | Debtors velocity (Sales/Debtors) | 12 times |
| (iv) | Stock Velocity (Cost of goods sold/stock) | 12 times |
| (v) | Creditors velocity (Cost of goods sold/creditors) | 12 times |
| (vi) | Gross profit/sales | 25% |
| (vii) | Proposed dividend | 20% |
| (viii) | Tax rate | $33^1/_3$ |
| (ix) | Debt service coverage ratio | 1 time |
| (x) | Interest coverage ratio 3 times interest on the balance of loan outstanding on 1.4.2000 | |
| (xi) | Selling and distribution expenses | ₹ 1,80,000 |
| (xii) | Depreciation rate | 40% |
| (xiii) | Cost of goods sold does not include depreciation. | |
| (xiv) | On the basis of the above-mentioned information, you are required to complete the balance sheet as on 31.3.2001. | |

On the basis of the above-mentioned information, you are required to complete the Balance Sheet as on 31.03.2001 and also prepare the Income Statement. [12]

(b) Balance Sheet of Q Ltd. as on 31 March 2008

| Liabilities | ₹ in Crores | Assets | ₹ in Crores |
|---|---|---|---|
| Equity Shares | 20.80 | Fixed Assets | 105.60 |
| Long-term Liabilities | 104.00 | Current Assets | 57.60 |
| Current Liabilities | 78.40 | Profit & Loss A/c | 40.00 |
| | 203.20 | | 203.20 |

Additional Information:
(i) Depreciation written off ₹8 crores.
(ii) Preliminary Expenses written off ₹1.60 crores.
(iii) Net Loss ₹25.60 crores.

Ascertain the stage of sickness [4]

5. (a) Following are the information of two companies for the year ended 31st March, 2002:

| Particulars | Company A | Company B |
|---|---|---|
| Equity Shares of ₹ 10 each | 8,00,000 | 10,00,000 |
| 10% Pref. Shares of ₹ 10 each | 6,00,000 | 4,00,000 |
| Profit after tax | 3,00,000 | 3,00,000 |

Assume the market expectation is 18% and 80% of the Profits are distributed.
(i) What is the rate you would pay to the Equity Shares of each Company?
- If you are buying a small lot.
- If you are buying controlling interest shares.

(ii) If you plan to invest only in preference shares which company's preference shares would you prefer?
(iii) Would your rates be different for buying small lot, if the company 'A' retains 30% and company 'B' 10% of the profits? [12]

(b) Capital employed by A Ltd. ₹ 18,00,000, future maintainable profit ₹ 3,50,000, normal rate of return 10% super profit can be maintained 5 years. Compute goodwill? What is the revised value of Goodwill if the normal rate of return is 18%? [4]

6. (a) Following are the financial statements for A Ltd. and B Ltd. for the current financial year. Both firms operate in the same industry. Balance Sheets of A Ltd & B Ltd

| | A Ltd. ₹ | B Ltd. ₹ |
|---|---|---|
| Total current assets | 14,00,000 | 10,00,000 |
| Total fixed assets (net) | 10,00,000 | 5,00,000 |
| Total Assets | 24,00,000 | 15,00,000 |
| Equity Capital (Of ₹10 each) | 10,00,000 | 8,00,000 |
| Retained earnings | 2,00,000 | - |
| 14% Long term debt | 5,00,000 | 3,00,000 |
| Total current liabilities | 7,00,000 | 4,00,000 |
| | 24,00,000 | 15,00,000 |

Income Statements

| | A Ltd. ₹ | B Ltd. ₹ |
|---|---|---|
| Net sales | 34,50,000 | 17,00,000 |
| Less: Cost of goods sold | (27,60,000) | (13,60,000) |
| Gross Profit | 6,90,000 | 3,40,000 |
| Less: Operating expenses | (2,00,000) | 1,00,000) |
| Less: Interest | (70,000) | (42,000) |
| Earnings before taxes | 4,20,000 | 1,98,000 |
| Less: Taxes (50%) | (2,10,000) | (99,000) |
| Earnings after taxes (EAT) | 2,10,000 | 99,000 |
| Additional Information: | | |
| Number of equity shares | 10,000 | 8,000 |
| Dividend payment ratio | 40% | 60% |
| Market price per share (MPS) | ₹400 | ₹150 |

Assume that the two firms are in the process of negotiating a merger through an exchange of equity shares. You have been asked to assist in establishing equitable exchange terms, and are required to:

(i) Decompose the share prices of both the firms into EPS and PE components, and also segregate their EPS figures into return on equity (ROE) and book value/intrinsic value per share (BVPS) components.

(ii) Estimate future EPS growth rates for each firm.

(iii) Based on expected operating synergies. A Ltd. estimates that the intrinsic values of B's equity share would be ₹20 per share on its acquisition.
You are required to develop a range of justifiable equity share exchange ratios that can be offered by A Ltd. to B Ltd's share-holders. Based on your analysis in parts (i) and (ii) would you expect the negotiated terms to be closer to the upper, or the lower exchange ratio limits? Why?

(iv) Calculate the post-merger EPS based on an exchange ratio of 0.4: 1 being offered by A Ltd. Indicate the immediate EPS accretion or dilution, if any, that will occur for each group of shareholders.

(v) Based on a 0.4:1 exchange ratio, and assuming that A's pre-merger PE ratio will continue after the merger, estimates the post-merger market price. Show the resulting accretion or dilution in pre-merger market prices. Market price per share (MPS) = EPS x P/E ratio or P/E Ratio = MPS / EPS [12]

**(b) From the following data, compute the 'Net Assets' value of each category of equity shares of Smith Ltd.,**
**10,000 'A' Equity shares of ₹ 100 each, fully paid**
**10,000 'B' Equity shares of ₹ 100 each, ₹ 80 paid**
**10,000 'C' Equity shares of ₹ 100 each, ₹ 50 paid**
**Retained Earnings ₹ 9,00,000** **[4]**

**7. (a) ABC Publishers Ltd. has been approached by other publishers Aajkal. Ltd. which is interested in buying the copy right of the book 'shareholders value creation'. To estimate the value of the copy right, the following assumptions are made;**

**(i) The book is expected to generate ₹1,50,000 in after –tax cash flows each year for the next three years to ABC Publishers Ltd. and ₹1,00,000 a year for the subsequent two years. These are the cash flows after author royalties, promotional expenses and production costs.**
**(ii) About 40% of these cash flows are from large organisations that make bulk orders and considered predictable and stable. The cost of capital applied to these cash flows is 7%.**
**(iii) The remaining 60% of the cash flows are to the general public and this segment of the cash flows is considered much more volatile. The cost of capital applied to these cash flows is 10%.**

**Based on the information given above, estimate the value of the copyright.** **[8]**

**(b) Indian Commercial Bank has a criterion that it will give loan to companies that have an economic value added greater than zero for the past three years on average. The bank is considering lending money to a small company that has the economic value characteristics shown below. Does that company meet the bank's criterion for a positive economic value added? The data relating to the company is as follows:**
**(i) Average operating income before tax equals ₹ 50,00,000 per year for the last three years**
**(ii) The average tax rate for 3 years equals to 35.875%**
**(iii) The average total assets of company over the past three years equals ₹ 1,50,00,000**
**(iv) The weighted average cost of capital appropriate for the company equals 10% which is applicable to all three years.**
**(v) The company's average current liabilities over the past three year equals ₹ 30,00,000**
**[8]**

**8. (a) Write a short note any four of the following**
**(i) EBIT-EPS Indifference Point**
**(ii) Common errors in Valuation**
**(iii) Replacement Value and Realizable Value**
**(iv) Various types of Business Acquisition**
**(v) Financial Modeling** **[4×4 = 16]**