

## **DISCLAIMER**

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## PAPER – 2 : STRATEGIC FINANCIAL MANAGEMENT

Question No.1 is compulsory.

Candidates are also required to answer any **five** questions from the remaining **six** questions.

Wherever necessary suitable assumptions may be made and disclosed by way of note.

Working notes should form part of the answer.

### Question 1

- (a) X Ltd. earns ₹ 6 per share having a capitalization rate of 10 percent and has a return on investment of 20%. According to Walter's model, what should be the price of the share at 25% dividend payout?
- (b) Calculate the Current price and the Bond equivalent yield (using simple compounding) of a money market instrument with face value of ₹ 100 and discount yield of 8% in 90 days. Take 1 year 360 days.
- (c) The following information is extracted from Steady Mutual Fund's Scheme:
- |                                              |                     |
|----------------------------------------------|---------------------|
| - Asset Value at the beginning of the month  | - ₹ 65.78           |
| - Annualised return                          | -15 %               |
| - Distributions made in the nature of Income | - ₹ 0.50 and ₹ 0.32 |
| & Capital gain (per unit respectively).      |                     |

You are required to:

- (1) Calculate the month end net asset value of the mutual fund scheme (limit your answers to two decimals).
- (2) Provide a brief comment on the month end NAV.
- (d) The US dollar is selling in India at ₹55.50. If the interest rate for a 6 months borrowing in India is 10% per annum and the corresponding rate in USA is 4%.
- (i) Do you expect that US dollar will be at a premium or at discount in the Indian Forex Market?
- (ii) What will be the expected 6-months forward rate for US dollar in India? and
- (iii) What will be the rate of forward premium or discount? (4 x 5 Marks=20 Marks)

### Answer

- (a) Walter Model is as follows:-

$$V_e = \frac{D + \frac{R_a}{R_c}(E - D)}{R_c}$$

$V_e$  = Market value of the share

$R_a$  = Return on retained earnings

$R_e$  = Capitalisation rate

$E$  = Earnings per share

$D$  = Dividend per share

Hence, if Walter model is applied-

$$\text{Market value of the share } V_C = \frac{\text{₹ } 1.50 + \frac{0.20}{0.10} (\text{₹ } 6.00 - \text{₹ } 1.50)}{0.10}$$

or

$$V_C = \frac{\text{₹ } 1.50 + \frac{0.20}{0.10} (\text{₹ } 4.50)}{0.10}$$

or

$$V_C = \frac{\text{₹ } 1.50 + \text{₹ } 9.00}{0.10} = \frac{\text{₹ } 10.50}{0.10} = \text{₹ } 105$$

(b) Let Current Price of Bond is V then

$$\text{₹ } 100 = V (1+r)^t$$

$$\text{₹ } 100 = V (1+0.08)$$

$$\text{₹ } 100 = V (1.08)$$

$$V = \text{₹ } 92.59$$

Bond Equivalent Yield

$$\text{BEY} = \frac{\text{₹ } 100 - V}{V} \times \frac{360}{\text{Days to Maturity}}$$

$$= \frac{\text{₹ } 100 - \text{₹ } 92.59}{\text{₹ } 92.59} \times \frac{360}{90}$$

$$= 0.32 \text{ i.e. } 32\%$$

**Alternative Solution if students have assumed 8% discount yield as annual yield**

$$\text{₹ } 100 = V (1+r)^t$$

$$\text{₹ } 100 = V (1+0.02)$$

$$\text{₹ } 100 = V (1.02)$$

$$V = ₹98.04$$

Bond Equivalent Yield

$$BEY = \frac{₹ 100 - V}{V} \times \frac{360}{\text{Days to Maturity}}$$

$$= \frac{₹ 100 - ₹ 98.04}{₹ 98.04} \times \frac{360}{90}$$

$$= 0.07997 \text{ i.e. } 8\%$$

- (c) (1) Calculation of NAV at the end of month:

Given Annual Return = 15%

Hence Monthly Return = 1.25% (r)

$$r = \frac{(\text{NAV}_t - \text{NAV}_{t-1}) + I_t + G_t}{\text{NAV}_{t-1}}$$

$$0.0125 = \frac{(\text{NAV}_t - ₹ 65.78) + ₹ 0.50 + ₹ 0.32}{₹ 65.78}$$

$$0.82 = \text{NAV}_t - ₹ 64.96$$

$$\text{NAV}_t = ₹ 65.78$$

- (2) There is no change in NAV.

- (d) (i) Under the given circumstances, the USD is expected to quote at a premium in India as the interest rate is higher in India.

- (ii) Calculation of the forward rate:

$$\frac{1 + R_h}{1 + R_f} = \frac{F_1}{E_0}$$

Where:  $R_h$  is home currency interest rate,  $R_f$  is foreign currency interest rate,  $F_1$  is end of the period forward rate, and  $E_0$  is the spot rate.

$$\text{Therefore } \frac{1 + (0.10/2)}{1 + (0.04/2)} = \frac{F_1}{55.50}$$

$$\frac{1 + 0.05}{1 + 0.02} = \frac{F_1}{55.50}$$

$$\text{or } \frac{1.05}{1.02} \times 55.50 = F_1$$

$$\text{or } \frac{58.275}{1.02} = F_1$$

$$\text{or } F_1 = ₹57.13$$

(iii) Rate of premium:

$$\frac{57.13 - 55.50}{55.50} \times \frac{12}{6} \times 100 = 5.87\%$$

## Question 2

(a) H Ltd. agrees to buy over the business of B Ltd. effective 1<sup>st</sup> April, 2012. The summarized Balance Sheets of H Ltd. and B Ltd. as on 31<sup>st</sup> March 2012 are as follows:

| <b>Balance sheet as at 31<sup>st</sup> March, 2012 (In Crores of Rupees)</b> |                 |                |
|------------------------------------------------------------------------------|-----------------|----------------|
| <b><u>Liabilities:</u></b>                                                   | <b>H. Ltd</b>   | <b>B. Ltd.</b> |
| Paid up Share Capital                                                        |                 |                |
| -Equity Shares of ₹100 each                                                  | 350.00          |                |
| -Equity Shares of ₹100 each                                                  |                 | 6.50           |
| Reserve & Surplus                                                            | 950.00          | 25.00          |
| <b>Total</b>                                                                 | <b>1,300.00</b> | <b>31.50</b>   |
| <b><u>Assets:</u></b>                                                        |                 |                |
| Net Fixed Assets                                                             | 220.00          | 0.50           |
| Net Current Assets                                                           | 1,020.00        | 29.00          |
| Deferred Tax Assets                                                          | 60.00           | 2.00           |
| <b>Total</b>                                                                 | <b>1,300.00</b> | <b>31.50</b>   |

H Ltd. proposes to buy out B Ltd. and the following information is provided to you as part of the scheme of buying:

- (1) The weighted average post tax maintainable profits of H Ltd. and B Ltd. for the last 4 years are ₹300 crores and ₹10 crores respectively.
- (2) Both the companies envisage a capitalization rate of 8%.
- (3) H Ltd. has a contingent liability of ₹300 crores as on 31<sup>st</sup> March, 2012.
- (4) H Ltd. to issue shares of ₹100 each to the shareholders of B Ltd. in terms of the exchange ratio as arrived on a Fair Value basis. (Please consider weights of 1 and 3 for the value of shares arrived on Net Asset basis and Earnings capitalization method respectively for both H Ltd. and B Ltd.)

You are required to arrive at the value of the shares of both H Ltd. and B Ltd. under:

- (i) Net Asset Value Method
- (ii) Earnings Capitalisation Method

- (iii) Exchange ratio of shares of H Ltd. to be issued to the shareholders of B Ltd. on a Fair value basis (taking into consideration the assumption mentioned in point 4 above.) (12 Marks)
- (b) With the help of the following information of Jatayu Limited compute the Economic Value Added:

|                    |                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------|
| Capital Structure  | Equity capital ₹160 Lakhs<br>Reserves and Surplus ₹140 lakhs<br>10% Debentures ₹400 lakhs |
| Cost of equity     | 14%                                                                                       |
| Financial Leverage | 1.5 times                                                                                 |
| Income Tax Rate    | 30%                                                                                       |

(4 Marks)

**Answer****(a) (i) Net asset value**

|        |                                                                                       |
|--------|---------------------------------------------------------------------------------------|
| H Ltd. | $\frac{₹ 1300 \text{ Crores} - ₹ 300 \text{ Crores}}{3.50 \text{ Crores}} = ₹ 285.71$ |
| B Ltd. | $\frac{₹ 31.50 \text{ Crores}}{0.65 \text{ Crores}} = ₹ 48.46$                        |

**(ii) Earning capitalization value**

|        |                                                                       |
|--------|-----------------------------------------------------------------------|
| H Ltd. | $\frac{₹ 300 \text{ Crores} / 0.08}{3.50 \text{ Crores}} = ₹ 1071.43$ |
| B Ltd. | $\frac{₹ 10 \text{ Crores} / 0.08}{0.65 \text{ Crores}} = ₹ 192.31$   |

**(iii) Fair value**

|        |                                                               |
|--------|---------------------------------------------------------------|
| H Ltd. | $\frac{₹ 285.71 \times 1 + ₹ 1071.43 \times 3}{4} = ₹ 875$    |
| B Ltd. | $\frac{₹ 48.46 \times 1 + ₹ 192.31 \times 3}{4} = ₹ 156.3475$ |

Exchange ratio  $₹156.3475 / ₹875 = 0.1787$

H Ltd should issue its 0.1787 share for each share of B Ltd.

**Note:** In above solution it has been assumed that the contingent liability will materialize at its full amount.

(b) Financial Leverage = PBIT/PBT

$$1.5 = \text{PBIT} / (\text{PBIT} - \text{Interest})$$

$$1.5 = \text{PBIT} / (\text{PBIT} - 40)$$

$$1.5 (\text{PBIT} - 40) = \text{PBIT}$$

$$1.5 \text{ PBIT} - 60 = \text{PBIT}$$

$$1.5 \text{ PBIT} - \text{PBIT} = 60$$

$$0.5 \text{ PBIT} = 60$$

$$\text{or PBIT} = \frac{60}{0.5} = ₹120 \text{ lakhs}$$

$$\text{NOPAT} = \text{PBIT} - \text{Tax} = ₹120 \text{ lakhs} (1 - 0.30) = ₹84 \text{ lakhs.}$$

Weighted Average Cost of Capital (WACC)

$$= 14\% \times (300 / 700) + (1 - 0.30) \times (10\%) \times (400 / 700) = 10\%$$

$$\text{EVA} = \text{NOPAT} - (\text{WACC} \times \text{Total Capital})$$

$$\text{EVA} = ₹120 \text{ lakhs} - 0.10 \times ₹700 \text{ lakhs}$$

$$\text{EVA} = ₹50 \text{ lakhs}$$

### Question 3

- (a) You as an investor had purchased a 4 month call option on the equity shares of X Ltd. of ₹10, of which the current market price is ₹132 and the exercise price ₹150. You expect the price to range between ₹120 to ₹190. The expected share price of X Ltd. and related probability is given below:

|                    |     |     |     |     |     |
|--------------------|-----|-----|-----|-----|-----|
| Expected Price (₹) | 120 | 140 | 160 | 180 | 190 |
| Probability        | .05 | .20 | .50 | .10 | .15 |

Compute the following:

- (1) Expected Share price at the end of 4 months.
  - (2) Value of Call Option at the end of 4 months, if the exercise price prevails.
  - (3) In case the option is held to its maturity, what will be the expected value of the call option?
- (b) Z Ltd. importing goods worth USD 2 million, requires 90 days to make the payment. The overseas supplier has offered a 60 days interest free credit period and for additional credit for 30 days an interest of 8% per annum.

The bankers of Z Ltd offer a 30 days loan at 10% per annum and their quote for foreign exchange is as follows:

|                           | ₹     |
|---------------------------|-------|
| Spot 1 USD                | 56.50 |
| 60 days forward for 1 USD | 57.10 |
| 90 days forward for 1 USD | 57.50 |

You are required to evaluate the following options:

(I) Pay the supplier in 60 days, or

(II) Avail the supplier's offer of 90 days credit.

(8 Marks)

**Answer**

**(a) (1) Expected Share Price**

$$= ₹120 \times 0.05 + ₹140 \times 0.20 + ₹160 \times 0.50 + ₹180 \times 0.10 + ₹190 \times 0.15$$

$$= ₹6 + ₹28 + ₹80 + ₹18 + ₹28.50 = ₹160.50$$

**(2) Value of Call Option**

$$= ₹150 - ₹150 = \text{Nil}$$

**(3) If the option is held till maturity the expected Value of Call Option**

| Expected price (X) | Value of call (C) | Probability (P) | CP  |
|--------------------|-------------------|-----------------|-----|
| ₹120               | 0                 | 0.05            | 0   |
| ₹140               | 0                 | 0.20            | 0   |
| ₹160               | ₹10               | 0.50            | ₹5  |
| ₹180               | ₹30               | 0.10            | ₹3  |
| ₹190               | ₹40               | 0.15            | ₹6  |
| Total              |                   |                 | ₹14 |

**(b) (i) Pay the supplier in 60 days**

|                                                                                     |               |
|-------------------------------------------------------------------------------------|---------------|
| If the payment is made to supplier in 60 days the applicable forward rate for 1 USD | ₹ 57.10       |
| Payment Due                                                                         | USD 2,000,000 |
| Outflow in Rupees (USD 2000000 × ₹57.10)                                            | ₹114,200,000  |
| Add: Interest on loan for 30 days@10% p.a.                                          | ₹ 951,667     |
| Total Outflow in ₹                                                                  | ₹115,151,667  |

**(ii) Availing supplier's offer of 90 days credit**

|                                                    |               |
|----------------------------------------------------|---------------|
| Amount Payable                                     | USD 2,000,000 |
| Add: Interest on credit period for 30 days@8% p.a. | USD 13,333    |
| Total Outflow in USD                               | USD 2,013,333 |

|                                             |              |
|---------------------------------------------|--------------|
| Applicable forward rate for 1 USD           | ₹57.50       |
| Total Outflow in ₹ (USD 2,013,333 × ₹57.50) | ₹115,766,648 |

Alternative 1 is better as it entails lower cash outflow.

#### Question 4

- (a) Eagle Ltd. reported a profit of ₹ 77 lakhs after 30% tax for the financial year 2011-12. An analysis of the accounts revealed that the income included extraordinary items of ₹ 8 lakhs and an extraordinary loss of ₹10 lakhs. The existing operations, except for the extraordinary items, are expected to continue in the future. In addition, the results of the launch of a new product are expected to be as follows:

|                | ₹ In lakhs |
|----------------|------------|
| Sales          | 70         |
| Material costs | 20         |
| Labour costs   | 12         |
| Fixed costs    | 10         |

You are required to:

- Calculate the value of the business, given that the capitalization rate is 14%.
  - Determine the market price per equity share, with Eagle Ltd.'s share capital being comprised of 1,00,000 13% preference shares of ₹100 each and 50,00,000 equity shares of ₹10 each and the P/E ratio being 10 times. (8 Marks)
- (b) Mr. FedUp wants to invest an amount of ₹ 520 lakhs and had approached his Portfolio Manager. The Portfolio Manager had advised Mr. FedUp to invest in the following manner:

| Security            | Moderate | Better | Good | Very Good | Best |
|---------------------|----------|--------|------|-----------|------|
| Amount (in ₹ Lakhs) | 60       | 80     | 100  | 120       | 160  |
| Beta                | 0.5      | 1.00   | 0.80 | 1.20      | 1.50 |

You are required to advise Mr. FedUp in regard to the following, using Capital Asset Pricing Methodology:

- Expected return on the portfolio, if the Government Securities are at 8% and the NIFTY is yielding 10%.
- Advisability of replacing Security 'Better' with NIFTY. (8 Marks)

**Answer****(a) (i) Computation of Business Value**

|                                        |           | (₹ Lakhs)    |
|----------------------------------------|-----------|--------------|
| Profit before tax $\frac{77}{1-0.30}$  |           | 110          |
| Less: Extraordinary income             |           | (8)          |
| Add: Extraordinary losses              |           | <u>10</u>    |
|                                        |           | 112          |
| <i>Profit from new product</i>         | (₹ Lakhs) |              |
| Sales                                  | 70        |              |
| Less: Material costs                   | 20        |              |
| Labour costs                           | 12        |              |
| Fixed costs                            | <u>10</u> |              |
|                                        | (42)      | <u>28</u>    |
|                                        |           | 140.00       |
| Less: Taxes @30%                       |           | <u>42.00</u> |
| Future Maintainable Profit after taxes |           | <u>98.00</u> |
| Relevant Capitalisation Factor         |           | 0.14         |
| Value of Business (₹98/0.14)           |           | 700          |

**(ii) Determination of Market Price of Equity Share**

|                                                                 |                    |
|-----------------------------------------------------------------|--------------------|
| Future maintainable profits (After Tax)                         | ₹ 98,00,000        |
| Less: Preference share dividends 1,00,000 shares of ₹ 100 @ 13% | <u>₹ 13,00,000</u> |
| Earnings available for Equity Shareholders                      | <u>₹ 85,00,000</u> |
| No. of Equity Shares                                            | 50,00,000          |
| Earning per share = $\frac{₹ 85,00,000}{50,00,000} =$           | ₹ 1.70             |
| PE ratio                                                        | 10                 |
| Market price per share                                          | ₹ 17               |

**(b) (i) Computation of Expected Return from Portfolio**

| Security | Beta (β) | Expected Return (r) as per CAPM | Amount (₹ Lakhs) | Weights (w) | wr    |
|----------|----------|---------------------------------|------------------|-------------|-------|
| Moderate | 0.50     | $8\% + 0.50(10\% - 8\%) = 9\%$  | 60               | 0.115       | 1.035 |
| Better   | 1.00     | $8\% + 1.00(10\% - 8\%) = 10\%$ | 80               | 0.154       | 1.540 |

|           |      |                                    |            |              |               |
|-----------|------|------------------------------------|------------|--------------|---------------|
| Good      | 0.80 | $8\% + 0.80(10\% - 8\%) = 9.60\%$  | 100        | 0.192        | 1.843         |
| Very Good | 1.20 | $8\% + 1.20(10\% - 8\%) = 10.40\%$ | 120        | 0.231        | 2.402         |
| Best      | 1.50 | $8\% + 1.50(10\% - 8\%) = 11\%$    | <u>160</u> | <u>0.308</u> | <u>3.388</u>  |
| Total     |      |                                    | <u>520</u> | <u>1</u>     | <u>10.208</u> |

Thus Expected Return from Portfolio 10.208% say 10.21%

- (ii) As computed above the expected return from Better is 10% same as from Nifty, hence there will be no difference even if the replacement of security is made. The main logic behind this neutrality is that the beta of security 'Better' is 1 which clearly indicates that this security shall yield same return as market return.

### Question 5

- (a) Following Financial Data for Platinum Ltd. are available:

| For the year 2011:                   | (₹ In lakhs) |
|--------------------------------------|--------------|
| Equity Shares (₹ 10 each)            | 100          |
| 8% Debentures                        | 125          |
| 10% Bonds                            | 50           |
| Reserve and Surplus                  | 200          |
| Total Assets                         | 500          |
| Assets Turnover Ratio                | 1.1          |
| Effective Tax Rate                   | 30%          |
| Operating Margin                     | 10%          |
| Required rate of return of investors | 15%          |
| Dividend payout ratio                | 20%          |
| Current market price of shares       | ₹13          |

You are required to:

- Draw income statement for the year
  - Calculate the sustainable growth rate
  - Compute the fair price of the company's share using dividend discount model, and
  - Draw your opinion on investment in the company's share at current price. (8 Marks)
- (b) Tiger Ltd. is presently working with an Earning Before Interest and Taxes (EBIT) of ₹90 lakhs. Its present borrowings are as follows:

|                             | ₹ In lakhs |
|-----------------------------|------------|
| 12% term loan               | 300        |
| Working capital borrowings: |            |
| From Bank at 15%            | 200        |
| Public Deposit at 11 %      | 100        |

The sales of the company are growing and to support this, the company proposes to obtain additional borrowing of ₹100 lakhs expected to cost 16%. The increase in EBIT is expected to be 15%.

Calculate the change in interest coverage ratio after the additional borrowing is effected and comment on the arrangement made. (8 Marks)

**Answer**

**(a) (i) Workings:**

|                            |                                                   |
|----------------------------|---------------------------------------------------|
| Asset turnover ratio       | = 1.1                                             |
| Total Assets               | = ₹500 lakhs                                      |
| Turnover ₹ 500 lakhs × 1.1 | = ₹550 lakhs                                      |
| Interest                   | = ₹125 lakhs × 0.08 + ₹50 lakhs × 0.10 = ₹15 lakh |
| Operating Margin           | = 10%                                             |
| Hence operating cost       | = (1 - 0.10) ₹550 lakhs = ₹495 lakh               |
| Dividend Payout            | = 20%                                             |
| Tax rate                   | = 30%                                             |

**(i) Income statement**

|                   | (₹ Lakhs)     |
|-------------------|---------------|
| Sale              | 550.00        |
| Operating Exp     | <u>495.00</u> |
| EBIT              | 55.00         |
| Interest          | <u>15.00</u>  |
| EBT               | 40.00         |
| Tax @ 30%         | <u>12.00</u>  |
| EAT               | 28.00         |
| Dividend @ 20%    | <u>5.60</u>   |
| Retained Earnings | <u>22.40</u>  |

(ii)  $SGR = G = ROE (1-b)$

$$ROE = \frac{PAT}{NW} \text{ and } NW = ₹100 \text{ lakhs} + ₹200 \text{ lakhs} = ₹300 \text{ lakhs}$$

$$ROE = \frac{₹ 28 \text{ lakhs}}{₹ 300 \text{ lakhs}} \times 100 = 9.33\%$$

$$SGR = 0.0933(1 - 0.20) = 7.47\%$$

(iii) Calculation of fair price of share using dividend discount model

$$P_0 = \frac{D_0(1+g)}{k_e - g}$$

$$\text{Dividends} = \frac{₹ 5.6 \text{ lakhs}}{10 \text{ lakhs}} = ₹0.56$$

$$\text{Growth Rate} = 7.47\%$$

$$\text{Hence } P_0 = \frac{₹ 0.56(1+0.0747)}{0.15-0.0747} = \frac{₹ 0.6018}{0.0753} = ₹7.99 \text{ say } ₹8.00$$

(iv) Since the current market price of share is ₹13.00, the share is overvalued.  
Hence the investor should not invest in the company.

**(b) Calculation of Present Interest Coverage Ratio**

Present EBIT = ₹ 90 lakhs

| Interest charges (Present) | ₹lakhs       |
|----------------------------|--------------|
| Term loan @ 12%            | 36.00        |
| Bank Borrowings @ 15%      | 30.00        |
| Public Deposit @ 11%       | <u>11.00</u> |
|                            | <u>77.00</u> |

$$\begin{aligned} \text{Present Interest Coverage Ratio} &= \frac{\text{EBIT}}{\text{Interest Charges}} \\ &= \frac{₹ 90 \text{ lakhs}}{₹ 77 \text{ lakhs}} = 1.169 \end{aligned}$$

Calculation of Revised Interest Coverage Ratio

Revised EBIT (115% of ₹ 90 lakhs) ₹103.50 lakhs

Proposed interest charges

Existing charges ₹ 77.00 lakhs

Add: Additional charges (16% of additional Borrowings i.e. ₹100 lakhs)      ₹ 16.00 lakhs

Total      ₹ 93.00 lakhs

$$\text{Revised Interest Coverage Ratio} = \frac{\text{₹ 103.50 lakhs}}{\text{₹ 93.00 lakhs}} = 1.113$$

**Analysis:** With the proposed increase in the sales the burden of interest on additional borrowings of ₹100 lakhs will adversely affect the interest coverage ratio which has been reduced. (i.e. from 1.169 to 1.113).

### Question 6

- (a) Yes Ltd. wants to acquire No Ltd. and the cash flows of Yes Ltd. and the merged entity are given below:

| (₹ In lakhs)  |     |     |     |     |     |
|---------------|-----|-----|-----|-----|-----|
| Year          | 1   | 2   | 3   | 4   | 5   |
| Yes Ltd.      | 175 | 200 | 320 | 340 | 350 |
| Merged Entity | 400 | 450 | 525 | 590 | 620 |

Earnings would have witnessed 5% constant growth rate without merger and 6% with merger on account of economies of operations after 5 years in each case. The cost of capital is 15%.

The number of shares outstanding in both the companies before the merger is the same and the companies agree to an exchange ratio of 0.5 shares of Yes Ltd. for each share of No Ltd.

PV factor at 15% for years 1-5 are 0.870, 0.756; 0.658, 0.572, 0.497 respectively.

You are required to:

- Compute the Value of Yes Ltd. before and after merger.
- Value of Acquisition and
- Gain to shareholders of Yes Ltd. (8 Marks)

- (b) Given the following information:

|                  |        |
|------------------|--------|
| Current Dividend | ₹ 5.00 |
| Discount Rate    | 10%    |
| Growth rate      | 2%     |

- Calculate the present value of the stock.
- Is the stock over valued if the price is ₹40, ROE = 8% and EPS = ₹3.00. Show your calculations under the PE Multiple approach and Earnings Growth model. (8 Marks)

**Answer****(a) (i) Working Notes:**

Present Value of Cash Flows (CF) upto 5 years

| Year End | CF of Yes Ltd.<br>(₹ lakhs) | PVF<br>@15% | PV of CF<br>(₹ lakhs) | CF of Merged<br>Entity<br>(₹ lakhs) | PV of CF of<br>Merged Entity<br>(₹ lakhs) |
|----------|-----------------------------|-------------|-----------------------|-------------------------------------|-------------------------------------------|
| 1        | 175                         | 0.870       | 152.25                | 400                                 | 348.00                                    |
| 2        | 200                         | 0.756       | 151.20                | 450                                 | 340.20                                    |
| 3        | 320                         | 0.658       | 210.56                | 525                                 | 345.45                                    |
| 4        | 340                         | 0.572       | 194.48                | 590                                 | 337.48                                    |
| 5        | 350                         | 0.497       | <u>173.95</u>         | 620                                 | <u>308.14</u>                             |
|          |                             |             | <u>882.44</u>         |                                     | <u>1679.27</u>                            |

PV of Cash Flows of Yes Ltd. after the forecast period

$$TV_5 = \frac{CF_5(1+g)}{K_e - g} = \frac{350(1+0.05)}{0.15-0.05} = \frac{367.50}{0.10} = ₹3675 \text{ lakhs}$$

PV of  $TV_5 = ₹3675 \text{ lakhs} \times 0.497 = ₹1826.475 \text{ lakhs}$ 

PV of Cash Flows of Merged Entity after the forecast period

$$TV_5 = \frac{CF_5(1+g)}{K_e - g} = \frac{620(1+0.06)}{0.15-0.06} = \frac{657.20}{0.09} = ₹7302.22 \text{ lakhs}$$

PV of  $TV_5 = ₹7302.22 \text{ lakhs} \times 0.497 = ₹3629.20 \text{ lakhs}$ **Value of Yes Ltd.**

|                      | Before merger (₹lakhs) | After merger (₹lakhs) |
|----------------------|------------------------|-----------------------|
| PV of CF (1-5 years) | 882.440                | 1679.27               |
| Add: PV of $TV_5$    | <u>1826.475</u>        | <u>3629.20</u>        |
|                      | <u>2708.915</u>        | <u>5308.47</u>        |

**(ii) Value of Acquisition**

= Value of Merged Entity – Value of Yes Ltd.

= ₹5308.47 lakhs – ₹2708.915 lakhs = ₹2599.555 lakhs

**(iii) Gain to Shareholders of Yes Ltd.**

Share of Yes Ltd. in merged entity = ₹5308.47 lakhs  $\times \frac{1}{1.5} = ₹3538.98 \text{ lakhs}$

Gain to shareholder = Share of Yes Ltd. in merged entity – Value of Yes Ltd. before merger

$$= ₹3538.98 \text{ lakhs} - ₹2708.915 = ₹830.065 \text{ lakhs}$$

**(b) (i) Present Value of the stock:-**

$$V_0 = \frac{5.00(1.02)}{0.10 - 0.02} = ₹63.75/-.$$

**(ii) Value of stock under the PE Multiple Approach**

| Particulars                             |         |
|-----------------------------------------|---------|
| Actual Stock Price                      | ₹ 40.00 |
| Return on equity                        | 8%      |
| EPS                                     | ₹ 3.00  |
| PE Multiple (1/Return on Equity) = 1/8% | 12.50%  |
| Market Price per Share                  | ₹ 37.50 |

Since, Actual Stock Price is higher, hence it is overvalued.

**(iii) Value of the Stock under the Earnings Growth Model**

| Particulars                                                                     |         |
|---------------------------------------------------------------------------------|---------|
| Actual Stock Price                                                              | ₹ 40.00 |
| Return on equity                                                                | 8%      |
| EPS                                                                             | ₹ 3.00  |
| Growth Rate                                                                     | 2%      |
| Market Price per Share $[EPS \times (1+g)] / (K_e - g)$<br>= ₹ 3.00 × 1.02/0.06 | ₹ 51.00 |

Since, Actual Stock Price is lower, hence it is undervalued.

**Question 7**

Answer any **four** from the following- :

- (a) Interface of Financial Policy and Strategic Management
- (b) Commercial Paper
- (c) American Depository Receipt
- (c) Advantages of holding securities in 'Demat' form
- (e) Synergy in the context of Mergers and Acquisitions

(4 x 4 Marks =16 Marks)

**Answer**

- (a) The interface of strategic management and financial policy will be clearly understood if we appreciate the fact that the starting point of an organization is money and the end point of that organization is also money. No organization can run an existing business and promote a new expansion project without a suitable internally mobilized financial base or both internally and externally mobilized financial base.

Sources of finance and capital structure are the most important dimensions of a strategic plan. The generation of funds may arise out of ownership capital and or borrowed capital. A company may issue equity shares and / or preference shares for mobilizing ownership capital.

Along with the mobilization of funds, policy makers should decide on the capital structure to indicate the desired mix of equity capital and debt capital. There are some norms for debt equity ratio. However this ratio in its ideal form varies from industry to industry. It also depends on the planning mode of the organization under study.

Another important dimension of strategic management and financial policy interface is the investment and fund allocation decisions. A planner has to frame policies for regulating investments in fixed assets and for restraining of current assets. Investment proposals mooted by different business units may be addition of a new product, increasing the level of operation of an existing product and cost reduction and efficient utilization of resources through a new approach and or closer monitoring of the different critical activities.

Now, given these three types of proposals a planner should evaluate each one of them by making within group comparison in the light of capital budgeting exercise.

Dividend policy is yet another area for making financial policy decisions affecting the strategic performance of the company. A close interface is needed to frame the policy to be beneficial for all. Dividend policy decision deals with the extent of earnings to be distributed as dividend and the extent of earnings to be retained for future expansion scheme of the firm.

It may be noted from the above discussions that financial policy of a company cannot be worked out in isolation of other functional policies. It has a wider appeal and closer link with the overall organizational performance and direction of growth. These policies being related to external awareness about the firm, specially the awareness of the investors about the firm, in respect of its internal performance. There is always a process of evaluation active in the minds of the current and future stake holders of the company. As a result preference and patronage for the company depends significantly on the financial policy framework. And hence attention of the corporate planners must be drawn while framing the financial policies not at a later stage but during the stage of corporate planning itself.

- (b) A commercial paper is an unsecured money market instrument issued in the form of a promissory note. Since the CP represents an unsecured borrowing in the money market, the regulation of CP comes under the purview of the Reserve Bank of India which issued guidelines in 1990 on the basis of the recommendations of the Vaghul Working Group. These guidelines were aimed at:

- (i) Enabling the highly rated corporate borrowers to diversify their sources of short term borrowings, and
- (ii) To provide an additional instrument to the short term investors.

It can be issued for maturities between 7 days and a maximum upto one year from the date of issue. These can be issued in denominations of Rs. 5 lakh or multiples therefore. All eligible issuers are required to get the credit rating from credit rating agencies.

Eligibility criteria for issuer of commercial paper

The companies satisfying the following conditions are eligible to issue commercial paper.

- The tangible net worth of the company is Rs. 5 crores or more as per audited balance sheet of the company.
  - The fund base working capital limit is not less than Rs. 5 crores.
  - The company is required to obtain the necessary credit rating from the rating agencies such as CRISIL, ICRA etc.
  - The issuers should ensure that the credit rating at the time of applying to RBI should not be more than two months old.
  - The minimum current ratio should be 1.33:1 based on classification of current assets and liabilities.
  - For public sector companies there are no listing requirement but for companies other than public sector, the same should be listed on one or more stock exchanges.
  - All issue expenses shall be borne by the company issuing commercial paper.
- (c) A depository receipt is basically a negotiable certificate denominated in US dollars that represent a non- US Company's publicly traded local currency (INR) equity shares/securities. While the term refer to them is global depository receipts however, when such receipts are issued outside the US, but issued for trading in the US they are called ADRs.

An ADR is generally created by depositing the securities of an Indian company with a custodian bank. In arrangement with the custodian bank, a depository in the US issues the ADRs. The ADR subscriber/holder in the US is entitled to trade the ADR and generally enjoy rights as owner of the underlying Indian security. ADRs with special/unique features have been developed over a period of time and the practice of issuing ADRs by Indian Companies is catching up.

Only such Indian companies that can stake a claim for international recognition can avail the opportunity to issue ADRs. The listing requirements in US and the US GAAP requirements are fairly severe and will have to be adhered. However if such conditions are met ADR becomes an excellent sources of capital bringing in foreign exchange.

These are depository receipts issued by a company in USA and are governed by the provisions of Securities and Exchange Commission of USA. As the regulations are severe, Indian companies tap the American market through private debt placement of GDRS listed in London and Luxemburg stock exchanges.

Apart from legal impediments, ADRS are costlier than Global Depository Receipts (GDRS). Legal fees are considerably high for US listing. Registration fee in USA is also substantial. Hence, ADRS are less popular than GDRS.

(d) From an individual investor point of view, the following are important advantages of holding securities in demat form:

- It is speedier and avoids delay in transfers.
- It avoids lot of paper work.
- It saves on stamp duty.

From the issuer-company point of view also, there are significant advantages due to dematting, some of which are:

- Savings in printing certificates, postage expenses.
- Stamp duty waiver.
- Easy monitoring of buying/selling patterns in securities, increasing ability to spot takeover attempts and attempts at price rigging.

(e) **Synergy May be defined as follows:**

$$V(AB) > V(A) + V(B).$$

In other words the combined value of two firms or companies shall be more than their individual value. This may be result of complimentary services economics of scale or both.

A good example of complimentary activities can a company may have a good networking of branches and other company may have efficient production system. Thus the merged companies will be more efficient than individual companies.

On Similar lines, economics of large scale is also one of the reason for synergy benefits. The main reason is that, the large scale production results in lower average cost of production e.g. reduction in overhead costs on account of sharing of central services such as accounting and finances, Office executives, top level management, legal, sales promotion and advertisement etc.

These economics can be “real” arising out of reduction in factor input per unit of output, whereas pecuniary economics are realized from paying lower prices for factor inputs to bulk transactions.