**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.**
**(For candidates admitted during the academic year 2009-2010)**

**SUBJECT CODE : CM/PC/FM24**

**M.Com. DEGREE EXAMINATION APRIL 2010**
**COMMERCE**
**SECOND SEMESTER**

**COURSE : MAJOR – CORE**
**PAPER : FINANCIAL MANAGEMENT**
**TIME : 3 HOURS** **MAX. MARKS : 100**

**SECTION – A**

**ANSWER ANY FIVE QUESTIONS:** **( 5 x 8 = 40 )**

1. Write short notes on :
   a. Value maximization
   b. Time value of money
   c. Capital rationing
   d. Internal rate of return

2. Briefly explain the factors that determine the capital structure of a firm.

3. X Ltd has Rs.10 lakhs allotted for capital investment purposes. The following proposals and the associated profitability indices have been determined.

| Project | Investment (Rs.) | Profitability indices |
|---|---|---|
| A | 3 lakhs | 1.22 |
| B | 1.5 lakhs | 0.95 |
| C | 3.5 lakhs | 1.2 |
| D | 4.5 lakhs | 1.18 |
| E | 2 lakhs | 1.2 |
| F | 4 lakhs | 1.05 |

   Which of the projects should be undertaken assuming:
   a. Projects are divisible
   b. Projects are indivisible

4. A firm has a sales of Rs.7.5 lakhs. Its variable cost is Rs.4.20 lakhs and Fixed cost Rs.60,000. It has a 9% debentures of Rs.4.50 lakhs and Equity capital of Rs.5.50 lakhs in shares of Rs.10 each. Tax rate is 50%. Calculate:
   a. Operating, Financial, Combined leverage and Earnings per share.
   b. If sales drops by 10%, what will be the percentage change in EBIT and EPS.

5. A Ltd has a choice of raising an additional sum of Rs.50 lakhs by either of the two options given below:
   a. Issue of 10% debentures of Rs.100 each
   b. Issue of 1 lakh equity shares at Rs.10 each at a premium of Rs.40 per share.
   The existing capital structure of the company consists of 1 lakh equity shares of Rs.10 each and no debt. At what level of EBIT, after the new capital is acquired, would the earnings per share be the same, whether new funds are raised by issue of debentures or equity shares? Assume a tax rate of 50%.

**..2**

6. Calculate the cost of capital in each of the following cases, assuming a tax rate of 50%:
   a. X ltd issues 12% debentures of the face value of Rs.100 at 5% discount. Floatation costs are Re.1 per debenture. Debentures are redeemable at the end of 10 years at a premium of 10%.
   b. Y Ltd issued 14% preference shares of Rs.100 each and realize Rs.92 per share. The shares are redeemable at the end of 8 years at par.
   c. A Ltd has 10000 equity shares of Rs.10 each and Rs.40,000 15% debentures. Its EBIT is Rs.48,000. Market price of the equity shares is Rs.21.

7. a. A deposits Rs.10,000 annually in a bank, which offers 12% interest per annum. What will be the value of the deposit at the end of 5 years, if,
   (i) the first deposit is made immediately.
   (ii) If the first deposit is made at the end of the first year.

   b. At the time of his retirement X is given the following options by his company.
   (i) Accept Rs.30,000 at the time of retirement and Rs.10,000 per year for the next 5 years.
   (ii) Accept Rs.10,000 at the end of one year after retirement, Rs.15,000 at the end of the second year, Rs.20,000 at the end of the third year, Rs.25,000 at the end of the fourth year and Rs.35,000 at the end of the fifth year.

   Advise X as to which option he should choose assuming he can earn 10% per annum on his investments.

   c. A Finance company offers you Rs.25,000 per annum for the next 5 years, if you deposit Rs.83800 today. What is the rate of interest the Company is offering?

   d. A deposits Rs.10,000 in a bank at 12% interest per annum. What will be the value of the deposit at the end of 5 years, if
   (i) Interest is compounded annually
   (ii) Interest is compounded half yearly.

8. Vimal & Co., is considering investing in a machine costing Rs.2,20,000. The machine has a life of 5 years and an estimated scrap value of Rs.20,000 at the end of its life. Forecast for annual income before depreciation and tax is as follows:

| Year | Rs. |
|---|---|
| 1 | 1,40,000 |
| 2 | 1,40,000 |
| 3 | 1,20,000 |
| 4 | 1,00,000 |
| 5 | 60,000 |

Assuming a tax rate of 50%, you are required to evaluate the project according to each of the following methods:
a) Pay-back method
b) Rate of return on average investment

## SECTION – B

ANSWER ANY THREE QUESTIONS: ( 3 x 20 = 60 )

9. The following figures of K Ltd are given to you:

| | Rs. | Rs. |
|---|---|---|
| EBIT | | 23,00,000 |
| Less debenture interest @ 8% | 80,000 | |
| Loan interest @ 11% | 2,20,000 | 3,00,000 |
| EBT | | 20,00,000 |
| Less tax | | 10,00,000 |
| EAT | | 10,00,000 |
| | | |
| Number of equity shares Rs.10 each | | 5,00,000 |
| EPS | | 2 |
| Market price per share | | 20 |
| P/E ratio | | 10 |

The company has undistributed reserves of Rs.20,00,000. It is in need of Rs.30,00,000 to modernize the plant. It has identified the following financing options:
a) Raise a term loan at 12%
b) Issue equity share of Rs.10 each at premium of Rs.10 per share
The Company expects to earn an EBIT of 22% on the total capital employed after modernization, but the P/E ratio is likely to reduce to 8 if the entire amount is raised through a term loan. Which financing option would you recommend?

10. Strong Enterprises Ltd is a manufacturer of high quality shoes. Mr. Ashok, President, is considering computerizing the company's ordering, inventory and billing procedures. He estimates that the annual savings from computerization include a reduction of ten clerical employees with annual salaries of Rs.15,000 each, Rs.8,000 from reduced production delays caused by raw materials inventory problems, Rs.12,000 from lost sales due to inventory stock outs and Rs.3,000 associated with timely billing procedures. The purchase price of the system is Rs.2,20,000 and installation costs are Rs.50,000. These outlays will be depreciated on a straight-line basis to Rs.20,000 salvage value, which is also its market value at the end of five years. Operation of the new system requires two computer specialists with annual salaries of Rs.40,000 per person. Also annual maintenance and operating (cash) expenses of Rs.12,000 are estimated to be required. The Company's tax rate is 40% and its required rate of return (cost of capital) for this project is 12%.
You are required to –
a) Find the project's initial net cash outlay.

b) Find the project's operating and terminal value cash flows over its 5 year life.

c) Evaluate the project using NPV method and Profitability Indices.

d) Calculate the payback period for the project.

11. The capital structure of X Ltd is as follows:

| | |
|---|---|
| Equity capital 3 lakh equity shares of Rs.10 each. | Rs.30 lakhs |
| Reserves | Rs.20 lakhs |
| 14% debentures of Rs.100 each | Rs.30 lakhs |
| 18% Term loan | Rs.20 lakhs |
| 16% Preference shares of Rs.100 each | Rs.10 lakhs |

The company had paid an equity dividend of 20% in the last year and the dividend is likely to grow by 10% every year. Equity shares are now traded at Rs.44 per share in the market. Tax rate is 50%.

Calculate:

a) Weighted average cost of capital using book value as weights.

b) If the company plans to raise Rs.20 lakhs by way of a long term loan at 16% interest, and use the proceeds to repay the existing 18% term loan, what will be the revised cost of capital using market value as weights. Assume in this case, the market value of equity share would increase to Rs.50 and the growth rate of dividend to 12%.

12. a) Critically evaluate the pay back method of Capital Budgeting. (**8 marks)**

b) From the following project details calculate NPV. Also calculate the sensitivity of the (a) Project cost (b) Annual cash inflow and (c) cost of capital. Which variable is the most sensitive:

| | | |
|---|---|---|
| Project cost | - | Rs.12,000 |
| Annual cash inflow | - | Rs. 4,500 |
| Life of project | - | 4 years |
| Cost of capital | - | 14% |

**(12 marks)**

13. The net sales of R Ltd is Rs.30 lakhs. Its EBIT is 12% of net sales. The capital employed consists of Rs.10 lakhs in equity shares of Rs.10 each, Rs.2 lakhs in 13% preference shares of Rs.10 each and Rs.6 lakhs in 15% debentures. The tax rate is 40% and the market price of equity shares is Rs.12.

(i) Prepare income statement and calculate return on equity capital, earnings per share and price earnings ratio.

(ii) Calculate the weighted average cost of capital of the company.

(iii) Calculate operating leverage if the Company's combined leverage is 3.

(iv) Calculate Fixed cost and Variable cost.

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