

**MASTER OF BUSINESS ADMINISTRATION  
FINANCIAL MARKETS  
(MBAFM)**

**Term-End Examination**

**December, 2013**

**MCT-078 : FINANCIAL MODELLING**

*Time : 3 hours*

*Maximum Marks : 100*

---

Note: *Attempt any five questions. All questions carry equal marks.*

---

1. "Financial models capture the future operating, investment and financing activities that determine future profitability, financial position and risk". Elucidate the statement with supportive examples. 20
  
2. (a) Find out the ROE of a company with the use of following information :  
EBIT → Rs. 4,000 10+5+5=20  
Tax Rate → 35%  
Interest rate → 15%  
Outstanding Debt → Rs. 10,000  
Equity value → Rs. 20,000
- (b) Based on the given information, calculation cost of equity.  
Beta → 1.5  
Risk free rate → 3%  
Market return → 9%
- (c) Define counter party credit risk.

3. Given below are details of a manufactory setup, which need to be plan. 20

- Total investment of 35,000,000 needs to be done for the project in the following phasing schedule.

Year 1 → 30% ; Year 2 → 20%

Year 3 → 20% ; Year 4 → 30%

- Plant will operate for 5 years. During development funding to be arranged as 65% Debt @ 8% interest rate, to be repaid equally over the 5 years of operations, (at end of each year) and 35% equity (@ 15% cost of equity).
- Finding should be assumed to have been raised throughout the period during development (Fully depreciate the total project cost in 5 years using straight line method).
- During operations expected selling price is Rs. 2500/unit with 12% Y/Y growth and cost price is Rs. 500/unit with 5% Y/Y growth.
- Quantity expected to be sold is 6000 with 10% Y/Y growth.
- Working capital is expected to be 5% of sales and operating expenses are expected to be 25% of sales.

- Tax rate is 30% and interest rate is 7% (Compute the interest income on beginning of period cash balance).

Evaluate the proposal by building an FSA projection model and estimate the returns generated on the investment using the IRR and the NPV techniques. What is the expected NPV for the given case ?

4. For non-conventional cash flows, which capital budgeting criteria should be preferred ? Give reasons in support of your answer. Explain the key importance of financial modelling for project appraisal. **20**
5. Write short notes on **Any Four** of the following : **4x5=20**
- (a) Interest rate of Return.
  - (b) Sensitivity and Scenario Analysis.
  - (c) EPS Forecasting.
  - (d) Financial Engineering.
  - (e) Monte Carlo Analysis.
  - (f) LBO Modelling.
6. The following proposal have cost of capital 4.50%. Calculate IRR, NPV for the following : **20**
- Company has started business with investment of ₹0.6 MM. Post this, in first year the cash flow was ₹0.075 MM and after that for next four years would be ₹0.1 MM, ₹0.15 MM, ₹0.20 MM, ₹0.21

MM . In last year that is sixth year the machine was sold for ₹0.15 MM. Please calculate all the above.

7. Financial information for X Ltd. 20

**Profit and loss Account Data (in Lakhs)**

Sales 800

Cost of Goods Sold 720

**Balance Sheet Data** **Beg. of 200X** **End of 200X**

Inventory 96 102

A/C Receivable 86 90

A/C Payable 56 60

Find the Operating and Cash Cycle for X Ltd.

8. Max Corp. currently provides 45 days of credit to its customers. The present sale is Rs.80 MM. The firm's cost of capital is 13% and the ratio of variable costs to sale is 0.75. Max is considering extending its credit period to 60 days. Such an extension is likely to push sales up by Rs. 20MM. The bad debts proportion on additional sales would be 10%. The tax rate for Max is 35%. What will be the effect of lengthening the credit period on the residual income of Max ? 20

---