FINAL EXAMINATION

December 2012

F–P12(AFM)
Syllabus 2008

Financial Management & International Finance

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

Please: (i) Answer all bits of a question at one place.
(ii) Open a new page for answer to a new question.
(iii) Tick the question number answered on the front sheet of the answer-book.

Answer Question No. 1 *from Part A which is compulsory and* any five *from Part B*

PART A (25 Marks)

1. (a) In each of the cases given below, one out of four answers is correct. Indicate the correct answer (= 1 mark) and give workings/reasons briefly in support of your answer (= 1 mark):

(i) Madura Steel earns 12% on the equity. The growth rate of dividends and earnings is 6%. The book value per share is Rs. 60. If the cost of equity is 14%, Which of the following is the market price of the share of company, according to the Marakon Model of Valuation?

(A) Rs. 36
(B) Rs. 39
(C) Rs. 45
(D) Rs. 48

(ii) R Limited requires Rs. 3 Million in cash for meeting its transaction needs over the next 6 months, its planning horizon for liquidity decision. The company currently has the amount in the form of marketable securities. The cash payment will be made evenly over the six month period. R Ltd. earns 12% annual yield on its marketable securities. Conversion of marketable securities into cash entails a fixed cost of Rs. 1,000 per transaction. What will be the optimal conversion size as per Baumol model of cash management?

(A) Rs. 3,15,628
(B) Rs. 3,16,228
(C) Rs. 3,17,678
(D) Rs. 3,18,428

(iii) The price of Swedish Krones is $ 0·14 today. If it appreciates by 10% today, how many Krones a dollar will buy tomorrow?

(A) 6·49351
(B) 4·69351
(C) 3·49513
(D) 5·64913

(iv) Calculate the future value of Rs. 1,000 invested in State Bank Cash Certificate scheme for 2 years @ 5·5% p.a., compounded semi-annually.

(A) Rs. 1,114·62
(B) Rs. 1,104·62
(C) Rs. 1,401·51
(D) Rs. 1,141·51

Please Turn Over

(v) A firm has sales of Rs. 75,00,000 variable cost of Rs. 42,00,000 and fixed cost of Rs. 6,00,000. It has a dept of Rs. 45,00,000 at 9% interest and equity of Rs. 55,00,000. At what level of sales, the EBIT of the firm will be equal to zero?

(A) Rs. 28,48,500
(B) Rs. 28,84,500
(C) Rs. 22,84,500
(D) Rs. 26,48,500

(vi) The sterling is trading at $ 1·6400 today. Inflation in U.K. is 3·8% and that in U.S.A. is 2·9%. What would be the spot rate ($/£) after 2 years?

(A) 1·5792
(B) 1·5892
(C) 1·6117
(D) 1·6002

(vii) The following various currency quotes are available from the State Bank of India:
₹/£ 81·31/81·33
£/$ 0·6491/0·6498
$/¥ 0·01098/0·01102
The rate at which yen (¥) can be purchased with rupees will be:

(A) 1·5270
(B) 1·5890
(C) 0·5824
(D) 0·7824

2×7=14

(b) State if each of the following sentences is T (= true) or F (= false):

(i) Corporate tax rate does not affect cost of debt.
(ii) IRR and NPV always give the same profitability ranking.
(iii) Retention ratio is the product between growth rate and rate of return on investments.
(iv) Low financial leverage indicates high financial risk and vice-versa.
(v) If Profitability Index is 1, cash inflow and cash outflow would be equal.
(vi) A currency swap converts a stream of cash flow from one currency to another without exchange rate risk.
(vii) An investor expecting a fall in interest rates buys a floor and also a cap.
(viii) Commercial paper introduced by RBI in early 1990, is 'a secured promissory note' tied to any specific transaction.
(ix) A call option is 'in-the-money' when the price of the underlying asset is below the exercise price of the call.

1×9=9

(c) Match the assumptions to the different 'Capital Structure theories':

Assumptions

(i) Cost of debt and cost of equity are constant, and overall cost of capital decreases with increase in leverage.
(ii) Cost of debt and overall cost of capital are constant, and cost of equity will change with the degree of leverage.

(iii) Value of firm increases with increase in financial leverage upto a certain limit only.
(iv) Overall cost of capital and the value of firm are independent of the capital structure.

Capital Structure theories

(A) Modigliani—Miller approach
(B) Traditional approach
(C) Net Income approach
(D) Net operating Income approach

(*Note*: Your answer may be of the form:

Assumption No. ———— Capital letter indicating Capital Structure theory) ½x4=2

PART B (75 Marks for any five questions)

2. (a) The following data relates to two companies belonging to the same risk class:

Particulars	X Ltd.	Y Ltd.
Expected Net Operating Income	Rs. 90,00,000	Rs.90,00,000
10% debt	Rs.60,00,000	——
Equity Capitalization rate	14%	12·5%

Required:

(i) Determine the total value and the weighted average cost of capital for each company, assuming no taxes.
(ii) Show the arbitrage process by which an investor who holds shares worth Rs. 90,000 in Y Ltd. will be benefited by investing in X Ltd.
(iii) Will he gain by investing in the undervalued firm?
(iv) When will this arbitrage process come to an end? 3+4+1·5+1·5=10

(b) Briefly describe stochastic Model of Cash Management. 5

3. (a) A Company has developed a new toy which has been estimated to have a life cycle of 3 years. To manufacture the toy, the company will have to purchase a semi-automatic injection moulding machine at a cost of Rs. 8,60,000. The machine will have to be scrapped after 3 years at a salvage value of Rs. 1,10,000. Variable cost of producing the toy would be 40% of the sales price.

Fixed expenses, apart from depreciation will be Rs. 50,000 per year. Besides, advertising and selling expenses will have to be incurred at the rate of Rs. 1,00,000 in the first year, Rs. 1,50,000 in the second year and Rs. 50,000 in the third year. The following projection of sales have been made after evaluating the consumer demand:

Probability	Estimated Sales in year (Rs. lakhs)		
	Year 1	Year 2	Year 3
0·3	12	25	10
0·6	7	17	15
0·1	2	9	4

The Company is subject to corporate tax rate of 30% and its cost of capital is 15%.

Prepare a schedule computing the probable sales of the new toy and estimated cash flows in each of the three years. Also determine net present value (NPV) of the proposal. Ignore tax on salvage value.

The present value of Rs. 1 earned at the year end discounted at 15%—

Year 1	Year 2	Year 3
0·870	0·756	0·658

10

(b) How is Economic Value Added (EVA) different from Market Value Added (MVA)? 5

4. (a) The selected financial data for A, B and C companies for the year ended March 31, 2012 are as follows:

Company	A	B	C
Financial Leverage	3 : 1	4 : 1	2 : 1
Interest	Rs. 200	Rs. 300	Rs. 1,000
Operating Leverage	4 : 1	5 : 1	3 : 1
Variable cost as a % to sales	$66\frac{2}{3}$%	75%	50%
Income-tax rate	45%	45%	45%

(i) Prepare Income statement for the year ended 31st March, 2012 for each company.

(ii) Comment on the financial position and capital structure of these companies. 7+3=10

(b) What do you understand by 'hybrid debt security'? Give examples. 5

5 (a) Trinadh Traders Limited currently sells on terms of net 30 days. All the sales are on credit basis and average collection period is 35 days. Currently, it sells 5,00,000 units at an average price of Rs. 50 per unit. The variable cost to sales ratio is 75% and a bad debt to sales ratio is 3%. In order to expand sales, the management of the company is considering changing the credit terms from net 30 to 2/10, net 30.

Due to the change in policy, sales are expected to go up by 10%, bad debt loss on additional sales will be 5% and bad debt loss on existing sales will remain unchanged at 3%. 40% of the customers are expected to avail the discount and pay on the tenth day. The average collection period for the new policy (in respect of additional sales) is expected to be 34 days. The company required a return of 20% on its investment in receivables.

You are required to find out the impact of the change in credit policy on the profit of the company. Also advise the management on implementation of new policy. Ignore taxes. Assume 1 year = 360 days. 10

(b) Indicate the important accounting ratios that would be used by each of the following:

(i) A long-term creditor interested in determining whether his claim is adequately secured.

(ii) A bank who has been approached by a company for short-term loan/overdraft.

(iii) A Shareholder who is examining his portfolio and who is to decide whether he should hold or sell his shares in a company. 1×3=3

(c) Unit Cost Structure of a product at an activity level of 60,000 units per anum:

	Rs.
Raw Material	5
Wages	4
Manufacturing overheads (including depreciation Rs.1)	3
Administrative expenses	1
Selling and distribution expenses	2

Production cycle is half-month. Calculate the value of stock of work-in-progress (on cash cost basis), if the degree of completion as to material is 80% and as to conversion cost is 60%. 2

6. (a) Given : Stock Price = \$ 23
Exercise Price = \$ 18
Risk-free rate = 0·06
Time to expire = 1·0 (1 year)

Standard deviation of the stock's return = 0·50 (variance is 0·25)

What is the value of this option?

(For N (0·86) = 0·805 and N (0·36) = 0·6405) 5

(b) An Indian customer who has imported equipment from Germany has approached a bank for booking a forward Euro contract. The delivery is expected six months from now. The following rates are quoted:

(\$/Euro) spot 0·8453/0·8457

6m – Swap points 15/20

Rs./ \$ spot 46·47/46·57

6m – Swap points 20/30

What rate the bank will quote, if it needs a margin of 0·5%? 5

(c) What do you understand by 'External Commercial Borrowing' (ECB)? Mention two agencies engaged in ECB. 5

7. (a) Consider the following rates:

Spot Rs./\$ 42·17/42·59

Rs./DM 24·61/25·10

3m forward Rs./\$ 43·15/43·60

Rs./DM 25·36/25·90

(i) From these rates, calculate the spot and forward DM/\$ rates. 5

(ii) What are the upper and lower boundaries for the DM/\$ quotations. 4

(b) When do you think money market hedging is not beneficial? 2

(c) State the two components of value of currency option. Slow a relationship between volatility of currency and option value. 4

8. Write short notes on (*any three*): 5×3=15

(a) Risk Adjusted Discount Rate (RADR)

(b) Interest Rate Floors

(c) Forward Rate Agreements (FRA)

(d) Project Life Cycle
