May 2007: Management Accounting and Financial Analysis

Question 1(a): **16 Marks**

XYZ Ltd. is considering a project for which the following estimates are available:

	Rs.
Initial cost of the project	10,00,000
Sales price / unit	60
Cons / unit	40
Sales volumes	
Year 1	20000 units
Year 2	30000 units
Year 3	30000 units
Discount rate 10% p.a.	

You are required to measure the sensitivity of the project in relation to each of the following parameters:

(a) Sales price / unit.
(b) Unit cost
(c) Sales volume
(d) Initial outlay and
(e) Project lifetime.

Taxation may be ignored.

Question 1(b): **4 Marks**

Write short notes on the role of Financial Advisor in a Public Sector undertaking.

Question 2(a): **8 Marks**

XYZ Ltd. a US firm will need £3,00,000 in 180 days. In this connection, the following information is available:

Sport rate 1£ = $2.00
180 day forward rate of £ as of today = $1.96
Interest rates are as follows:

	UK	US
180 days deposit rate	4.5%	5%
180 day borrowing rate	5%	5.5%

A call option on £ that expires in 180 days has an exercise price of $ 1.98 and a premium of $ 0.04.
XYZ Ltd. has forecast the sport rates 180 days hence as below:

Future rate	Probability
$1.91	25%
$1.95	60%
$2.05	15%

Which of the following strategies would be most preferable to XYZ Ltd.?

(a) a forward contract
(b) a money market hedge
(c) an option contract
(d) no hedging

show calculations in each case.

Question 2 (b): **8 Marks**

Expected returns on two stocks for particular market returns are given in the following table:

Market Return	Aggressive stock	Defensive stock
7%	4%	9%
25%	40%	18%

You are required to calculate:

(a) The Betas of the two stocks.
(b) Expected return of each stock, if the market return is equally likely to be 7% or 25%.
(c) The Security Market Line(SML), if the risk free rate is 7.5% and market return is equally likely to be 7% or 25%.
(d) The Alphas of the two stocks.

Question 2 (c): 4 Marks

Explain briefly the advantages of investing in mutual funds.

Question 3 (a): 8 Marks

AFC Ltd. wishes to acquire BCD Ltd. The shares issued by the two companies are10,00,000 and 5,00,000 respectively.

(i) Calculate the increase in the total value of BCD Ltd. resulting from the acquisition on the basis of the following conditions:

Current expected growth rate of BCD Ltd.	7%
Expected growth rate under control of AFC Ltd.	8%
(without any additional capital investment and without any change in risk of operations)	
Current Market price per share of AFC Ltd.	Rs.100
Current Market price per share of BCD Ltd.	Rs.20
Current Dividend per share of BCS Ltd.	Rs.0.60

(ii) On the basis of aforesaid conditions calculate the gain or loss to shareholders of both the companies, if AFC Ltd. were to offer one of its share for every four shares of BCD Ltd.

(iii) Calculate the gain to the shareholders of both the companies, if AFC Ltd. pays Rs.22 for each share of BCD Ltd. assuming the P/E Ratio of AFC Ltd. does not change after the merger. EPS of AFC Ltd. is Rs.8 and that of BCD is Rs.2.50. It is assumed that AFC Ltd. invests its cash to earn 10%.

Question 3(b): 8 Marks

AMK Ltd. an India based company has subsidiaries in U.S. and U.K.

Forecasts of surplus funds for the nest 30 days from two subsidiaries are as below:

U.S. $12.5 million
U.K £ 6 million

Following exchange rate information are obtained:

	$/Rs.	£/Rs.
Spot	0.0215	0.0149
30 days forward	0.0217	0.0150

Annual borrowing / deposit rates (simple) are available.

Rs.	6.4%/6.2%
$	1.6%/1.5%
£	3.9%/3.7%

The Indian operation is forecasting a cash deficit of Rs.500 million.

It is assumed that interest rates are based on a year of 360 days.

(i) Calculate the cash balance at the end of 30 days period in Rs. for each company under each of the following scenarios ignoring transaction costs and taxes:
   a. Each company invests/finances its own cash balances/deficits in local currency independently.
   b. Cash balances are pooled immediately in India and the net balances are invested / borrowed for the 30 days period.

(ii) Which method do you think is preferable from the parent company's point of view?

Question 3(c): 4 Marks

A money market instrument with face value of Rs.100 and discount yield of 6% will mature in 45 days. You are required to calculate:

(i) Current price of the instrument
(ii) Bond equivalent yield
(iii) Effective annual return

Question 4 (a): 8 Marks

ABC Co. is considering a new sales strategy that will be valid for the next 4 years. They want to know the value of the new strategy. Following information relating to the year which has just ended, is available:

Income statement	Rs.
Sales	20,000
Gross margin (20%)	4,000
Administration, Selling & Distribution on expense (10%)	2,000
PBT	2,000
Tax (30%)	600
PAT	1,400
Balance Sheet Information:	
Fixed Assets	8,000
Current Assets	4,000
Equity	12,000

If it adopts the new strategy, sales will grow at the rate of 20% per year for three years. The gross margin ratio, Assets turnover ratio, the Capital structure and the income tax rate will remain unchanged.

Depreciation would be at 10% of net fixed assets at the beginning of the year.

The Company's target rate of return is 15%.

Determine the incremental value due to adoption of the strategy.

Question 4(b): 8 Marks

Discuss the major sources available to an Indian Corporate for raising foreign currency finances.

Question 4(c): 4 Marks

(i) What are Stock futures
(ii) What are the opportunities offered by Stock futures
(iii) How are stock futures settled?

Question 5(a): 12 Marks

A Company is planning to acquire a machine costing Rs.5,00,000. Effective life of the machine is 5 years. The Company is considering two options. One is to purchase the machine by lease and the other is to borrow Rs.5,00,000 from its bankers at 105 interest p.a. The principal amount of loan will be paid in 5 equal instalments to be paid annually. The machine will be sold at Rs.50,000 at the end of 5^{th} year. Following further informations are given:

(a) Principal, interest, lease rentals are payable on the last day of each year.
(b) The machine will be fully depreciated over its effective life.
(c) Tax rate is 30% and after tax. Cost of capital is 8%.

Compute the lease rentals payable which will make the firm indifferent to the loan option.

Question 5(b): 8 Marks

The following informations are supplied to you:

	Rs.
Total earnings	2,00,000
No. of equity shares (of Rs.100 each)	20,000

Dividend paid	1,50,000
Price / Earning ratio	12.5

(i) Ascertain whether the company is the following an optimal dividend policy.

(ii) Find out what should be the P/E ratio at which the dividend policy will have no effect on the value of the share.

(iii) Will your decision change, if the P/E ratio is 8 instead of 12.5?

Question 6(a): 10 Marks

The historical rates of return of two securities over the past ten years are given. Calculate the co-variance and the correlation coefficient of the two securities:

Years	:	1	2	3	4	5	6	7	8	9	10
Security 1 (return per cent)	:	12	8	7	14	16	15	18	20	16	22
Security 2 (return per cent)	:	20	22	21	18	15	20	24	25	22	20

Question 6(b): 4 Marks

Write brief notes on Leveraged Buyouts (LBOs).

Question 6(c): 6 Marks

Find the Current market price of a bond having face value Rs.1,00,000 redeemable after 6 years maturity with YTM at 16% payable annually and duration 4.3202 years. Given $1.16^6 = 2.4364$.