C.A. Final (Old Course)

First Study

Subject: Management Accounting & Financial Analysis

Instructions :

(i) ***All questions are compulsory.***

(ii) ***Date of Examination : 22.02.2010***

(iii) ***Total Number of Questions : 5***

(iv) ***Total marks : 100***

(v) ***Total duration : 3 Hours***

(vi) ***Use of two colour pens (black & blue or Black or Pink etc) is NOT allowed. Use only single colour pen.***

(vii) ***Begin answer of the next question in new page.***

(viii) ***Answer all the questions serially.***

(ix) ***Working notes should form part of the answer.***

Question 1. **(a)** A scientist at Spectrum has come up with an electric moped. The firm is ready for pilot production and test marketing. This will cost Rs. 20 million and take six months. Management believes that there is a 70 percent chance that the pilot production and test marketing will be successful. In case of success, Spectrum can build a plant costing Rs. 150 million. The plant will generate an annual cash inflow of Rs. 30 million for 20 years if the demand is high or an annual cash inflow of Rs. 20 million if the demand is low. High demand has a probability of 0.6; low demand has a probability of 0.4. Consider 12 % discount rate.
Suggest the optimal course of action using decision tree analysis.

(16 marks)

(b) X Ltd., is considering merger with A Ltd. X Ltd.'s shares are currently traded at Rs. 20. It has 2,50,000 shares outstanding and its earnings after tax (EAT) amount to Rs. 5,00,000. A Ltd., has 1,25,000 shares outstanding; its current market price is Rs. 10 and its earnings after tax EAT are Rs. 1,25,000. The merger will be effected by means of a stock swap (exchange). A Ltd., has agreed to a plan under which X Ltd., will offer the current market value of A Ltd.'s shares:

(i) What are the pre-merger earnings per share (EPS) and P/E ratios of both the companies?
(ii) If A Ltd.'s P/E ratio is 6.4, what is its current market price? What is the exchange ratio? What will X Ltd.'s post-merger EPS be?
(iii) What should be the exchange ratio; if X Ltd.'s pre-merger and post-merger EPS are to be the same?

(4 marks)

Question 2
(a) RIL, is considering one of two mutually exclusive proposals, Projects I and II, which require cash outlays of Bs. 8,50,000 and Rs. 8,25,000 respectively. The certainty-equivalent (C.E.) approach is used in incorporating risk in capital budgeting decisions. The current yield on government bonds is 6% and this is used as the risk free rate. The expected net cash flows and their certainty equivalents are as follows:

	Project I		**Project II**	
Year-end	**Cash flow Rs.**	**C.E.**	**Cash flow Rs.**	**C.E.**
1	4,50,000	0.8	4,50,000	0.9
2	5,00,000	0.7	4,50,000	0.8
3	5,00,000	0.5	5,00,000	0.7

Present value factors of Re. 1 discounted at 6% at the end of year 1, 2 and 3 are 0.943, 0.890 and 0.794 respectively.

Required:
(i) Which project should be accepted?
(ii) If risk adjusted discount rate method is used, which project would be appraised with a higher rate and why?

(10 Marks)

(b) Current value of stock index is 4500 and the annualized dividend yield is 4%. A three month futures contract on the Sensex can be purchased for price of 4600. The risk free rate of return is 10%. Can the investor earn abnormal risk free rate of return by resorting to Arbitrage? Assume that 50% of the stocks in the index will pay dividends during the next three months. Ignore **transaction costs,** margin requirements and taxes.

(6 Marks)

(c) JIL has raised Rs. 500 crores through an issue of 9% bond. Each bond has a face value of Rs. 500 and 10 years term to maturity. As per the terms of the issue each bond is redeemable in four equal installment starting from the end of 7th year. You are required to find out the price of the bond if

YTM is 13%. And what is the Current Yield?

(4 marks)

Question 3 (a). A closed ended fund starts the year with a NAV of Rs.12. By year end NAV equals Rs.12.10. At the beginning of the year the fund was selling at 2% premium to the NAV and at the end of the year the fund is selling at a 7% discount to NAV. The fund paid year end distributions of income and capital gains of Rs.1.50.

a. What is the rate of return to an investor in the fund during the year?

b. What would have been the rate of return to an investor who held the same securities as the fund manager during the year?

(6 marks)

(b) From the given facts relating to the H L Ltd, calculate the annual rentals under the following rental structure for the 6years period:

a) Equate,
b) Stepped (annual rental of 12 per cent),
c) Ballooned (annual rental of Rs. 15 lakhs for year 1 and 2)
d) Deferred (deferment period of 1 year)

Investment cost	Rs. 96lakh
Primary lease term	3 years
Residual value	Nil
Pre-tax required rate of annual return	22 per cent

Assume that the lease can be renewed for an additional period of 3 year (secondary lease period). The lease rental for the secondary period will be 5 per cent of the rental charged during the primary period.

(10 marks)

(c) Write short note on REPO and Reverse REPO.

(4 Marks)

Question 4

(a) Neil Electronic Company acquires Proton Electronic Company on 'share for share exchange' basis. The position before takeover was as under:

Particulars	**Neil Electronic company**	**Proton Electronic company**
Number of shares	20,000	10,000
Total earnings (Rs.)	2,00,000	1,00,000
Market price of share, MPS (Rs.)	20	15

The shareholders of Proton Electronic Company are offered 7,500 shares of Neil Electronic Company for 10,000 shares (i.e. each shareholder or Proton Electronic Company gets 0.75 shares of Neil Electronic Company for 1 share of Proton Electronic Company)

You are required to calculate the EPS of the amalgamated company vis-à-vis before takeover position of the two companies and the gain/loss of the shareholders of the two independent companies consequent to amalgamation.

(8 marks)

(b)GS Corporation is deciding whether to pay out Rs. 500 excess cash either in the form of an extra dividend or via buyback. Current EPS is Rs. 2.50 per share and the stock price is Rs. 25. The market value of balance sheet before paying Rs. 500 is as follows:

Market Value Balance Sheet (before paying out excess cash)			
Excess Cash	Rs. 500	Debt	Rs. 500
Other assets	Rs. 2500	Equity	Rs. 2500
Total	Rs. 3000	Total	Rs. 3000

Evaluate the 2 alternatives in terms of the effect on the price of the stock, EPS and the PE Ratio.

(7 marks)

(c) List out the drawbacks of investing in Mutual Funds.

(5 Marks)

Question 5 (a) Mehta is interested in purchasing a European call option on Dabur Ltd. a non -dividend paying stock, with a strike price of Rs.100 and two years until expiration. Dabur Ltd. is currently trading at Rs.100 per share and the annual variance of its continuously compounded rate of return is 0.04. The treasury bill that matures in two years yield a continuously compounded interest rate of 5% per annum.

a) Use the Black Scholes Model to calculate the price of the call option that Mehta is interested in buying?

b) What does the put call parity imply about the price of the put, with the strike price of Rs.100 and two years until expiration?

(8 marks)

(b) Following are the details regarding three companies A Ltd. B Ltd. and C Ltd.

Details	A Ltd.	B Ltd.	C Ltd.
IRR	15%	5%	10%
Cost of equity capital	10%	10%	10%
EPS	Rs. 8	Rs. 8	Rs. 8

Calculate the value of an equity share of each of these companies applying Walter Model when D/P ratio is (i) 50% (ii) 75% (iii) 25%

Analyze your answers.

(6 marks)

(c) Stock R and S display the following returns over the past two years:

Year	Stock R Return (%)	Stock S Return (%)
2008	10	12
2009	16	18

(i) What is expected return on a portfolio made up of 40 percent R and 60 percent S?

(ii) What is the standard deviation of each stock?

(iii) What is the covariance of stocks R and S?

(iv) Determine the correlation coefficient of stocks R and S.

(v) What is the portfolio risk of a portfolio made up of 40 percent R and 60 percent S?

(6 marks)