AFRICAN ECONOMIC RESEARCH CONSORTIUM

Collaborative MA Programme in Economics for Anglophone Africa (Except Nigeria)

JOINT FACILITY FOR ELECTIVES (JFE)

JUNE – SEPTEMBER 2007

CORPORATE FINANCE AND INVESTMENT I

First Semester: Final Examination

Duration: 3 Hours **Date: Monday, August 6, 2007**

INSTRUCTIONS:

1. Answer **ANY FOUR** of the following six questions. Each question carries 25 marks.
2. Candidates are allowed to bring into the examination room calculators and written formulas with **no text written on them.**

Question 1

(a) Distinguish between the following concepts:

(i). European options and American options **[2 Marks]**

(ii). Eurobonds and foreign bonds **[4 Marks]**

(iii). Debt capital and Equity capital **[6 Marks]**

(b) Borrowing from C.J Kenny and T.J. Moss (2001) discuss the main problems facing stock markets in Sub Saharan Africa **[13 Marks]**

Question 2

(a) Consider the following financial information for JK industries Ltd for each of the past 4 years.

	2006 Kshs 000	2005 Kshs 000	2004 Kshs 000	2003 Kshs 000
Sales	21,104,678	20,505,789	18,467,897	16,765,456
PBIT	2,610,456	1,587,213	231,266	2,045,758
Fixed assets	1,154,321	1,249,654	1,489,745	1,498,766
Current assets	9,370,234	9,703,456	8,796,776	8,123,321
Current liability	8,370,234	8,703,456	8,123,546	6,789,654

NB. PBIT stands for Profit before interest and tax

(i). Calculate the liquidity ratios for each year and comment on the JK Industries' liquidity position over the 2003-2006 period. How useful are these ratios to creditors of JK Industries? **[8 Marks]**

(ii). Calculate the profitability ratios for each year and comment on the performance of JK Industries Ltd over the 2003-2006 period. How useful are these ratios to senior managers of JK industries? **[7 Marks]**

(b) Suppose the nominal annual rate is 10 %. Find the effective annual rate when interest is compounded:

(i). Annually

(ii). Semi-annually

(iii). Quarterly

[6 Marks]

(c) Suppose the effective annual rate for a loan is 10 % and the loan requires monthly payments. What is the stated rate? **[2 Marks]**

(d) KCB is offering 12 % interest, compounded monthly, on savings accounts. If you deposit Kshs 15 000 today, how much will you have in 5 years? **[2 Marks]**

Question 3

(a) What is the difference between systematic and unsystematic risk? **[5 marks]**

(b) The expected rates of return and the probabilities of their occurrence for stocks A and B are given below.

Probability of occurrence	Expected return (Stock A) %	Expected return (Stock B) %
0.02	-2.0	-3.0
0.05	2	6
0.20	5	10
0.50	12	14
0.15	18	20
0.05	20	22
0.03	24	30

(i). Find the expected rates of return for stock A and stock B

[4 Marks]

(ii). Consider three alternative Portfolios made up of A and B;

Portfolio 1: 50 % of stock A and 50 % of stock B

Portfolio 2: 25 % of stock A and 75 % of stock B

Portfolio 3: 75 % of stock A and 25 % of stock B

Calculate the expected rate of return on each of the three portfolios

[6 Marks]

(c) Mrs. J. Thomson's financial portfolio is made up of 20 % of security X, 30 % of security Y and 50 % of security Z. Her financial advisor has estimated the expected returns, the standard deviations and correlation coefficients for the three securities as follows;

Security	Expected return %	Standard deviation %
X	10	6
Y	12	8
Z	8	3

The correlation coefficient between the return on security X and the return on security Y is 0.6

The correlation coefficient between the return on security X and the return on security Z is 0.8

The correlation coefficient between the return on security Y and the return on security Z is 0.9

(i). Calculate the expected return on Mrs J. Thomson's portfolio **[4 Marks]**

(ii). Calculate the standard deviation of returns of Mrs. J. Thomson's portfolio **[6 marks]**

Question 4

(a) Write short notes on any four of the following concepts:

(i). Efficient portfolios

(ii). The Security market line

(iii). Separation theorem

(iv). Beta

(v). The Arbitrage Pricing model

(vi). Capital market line

[12 Marks]

(b) Consider a portfolio P, made up of 4 % of security AA, 76 % of security BB and 20 % of security CC. The risk free rate is assumed to be 5 % and the expected return on the market is 13 % with a standard deviation of 5. In addition you are provided with the following estimates

Security	Standard deviation %
Security AA	20
Security BB	10
Security CC	10

The correlation coefficient between the return on stock AA and the return on the market portfolio is 0.61

The correlation coefficient between the return on stock BB and the return on the market portfolio is 0.1

The correlation coefficient between the return on stock CC and the return on the market portfolio is 0.67

(i). Find the beta for each security and comment briefly on the responsiveness of each security to movements in the market portfolio. **[6 Marks]**

(ii). Find the expected returns on the three securities. **[3 Marks]**

(iii). Find the beta of the portfolio P. **[2 Marks]**

(iv). Use results from (iii) to calculate the equilibrium expected return on the portfolio P. **[2 Marks]**

Question 5

(a) Describe the following methods of using inventory as short-term loan collateral:

(i). Floating inventory lien

(ii). Trust receipt inventory loan

(iii). Warehouse receipt loan

[9 Marks]

(b) Briefly describe each of the following forms of unsecured, short-term bank loans:

(i). Single payment loans

(ii). Lines of credit

(iii). Revolving credit agreements

[10 Marks]

(c) A manufacturing company pays accounts payable on the tenth day after purchase. The average collection period is 30 days, and the average age of inventory is 40 days. The firm currently spends about Kshs 18 million on operating cycle investment. The firm is considering a plan that would stretch its accounts payable by 20 days. If the firm pays 12 % per year for its financing, what annual savings can it realise by this plan? Assume no discount for early payment of accounts payable and a 360-day year. **[6 Marks]**

Question 6

(a) Outline the theoretical predictions about the impact of stock markets and banks on economic growth. **[20 Marks]**

(b) What contribution have empirical studies made to this debate? **[5 Marks]**