NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF COMMERCE
DEPARTMENT OF FINANCE
BACHELOR OF COMMERCE HONOURS DEGREE IN
Accounting; Finance; Banking
Insurance & Risk Management
Actuarial Science
Marketing; Management
PART II Ist SEMESTER SUPPLEMENTARY EXAMINATION - JULY 2006
CORPORATE FINANCE I [CFI 2101]
TIME ALLOWED: 3HOURS

INSTRUCTIONS

♦ ANSWER ANY FIVE QUESTIONS

QUESTION 1   [20 marks]

(a)   What is the main objective of a company according to the classical approach?   [4]

((b)   Discuss three areas of conflict between shareholders and company managers in the financial field.   [6]

(c)   A father is planning a savings program to put his daughter through college. His daughter is now 13 years old. She plans to enroll at the university in 5 years, and it should take her 4 years to complete her education. Currently, the cost per year [for everything – food, clothing, tuition, books and transportation] is $12 500 but a 5% inflation rate in these costs is forecasted. The daughter recently received $7 500 from her grandfather's estate; this money, which is invested in a bank account paying 8% interest, compounded annually, will be used to help meet the costs if the daughter's education. The rest of the costs will be met by money, the father will deposit in the savings account. He will make 6 equal deposits to the account – one in each year from now until his daughter starts college. These deposits will begin today and will also earn 8% interest.

(i)   What will be the present value of the cost of 4 years of education at the time the daughter becomes 18?   [4]

(ii)   What will be the value of the $7 500 which the daughter received from her grandfather's estate when she starts college at age 18?   [3]

(iii)   If the father is planning to make the first of the 6 deposits today, how large must each deposit be for him to be able to put his daughter through college?   [3]

QUESTION 2   [20 Marks]

(a)   A new machine can be purchased for $15 000 with an economic life of 10 years and salvage at that time of $3 000.   Its operating disbursements are $8 000 p.a.   The present machine has a net realizable value of $3 000 and its operating disbursements are $10 000 p.a.   if the present machine is not replaced now, it is expected to continue on this service for 10 years. The salvage value will be zero. Alternatively, the present machine can be overhauled and modernized for $4 000 which will change the operating disbursements to $9 000 p.a. In this case, the economic life is also expected to be 10 years but with a salvage of $1 500 at that date. The minimum required rate of return is 25%. Which course of action should be selected?   [10]

(b)   Give and explain two strengths and two drawbacks of the payback period method of capital budgeting.   [4]

(c)   Describe how the modified IRR [MIRR] is calculated.   [6]

QUESTION 3   [20 Marks]

(a) Suppose you are the money manager of a $4 million investment fund. The fund consists of 4 stocks with the following investments and betas:

STOCK	INVESTMENT	BETA
A	$ 400 000	1.50
B	600 000	(0.50)
C	1 000 000	1.25
D	2 000 000	0.75

If the market required rate of return is 14% and the risk-free rate is 6%. What is the fund's required rate of return?   [10]

(b) Define the following in the context of corporate finance giving examples where feasible:

(i)   Diversifiable risk   [2]
(ii)   Market risk   [2]

(iii)   Co efficient of variation (cv)   [2]
(iv)   Security Market Line (SML)   [2]
(v)   Risk Aversion   [2]

QUESTION 4   [20 Marks]

(a)   Define the following terms, using graphs or equations to illustrate your answer wherever feasible:

   (i)   Feasible set   [2]
   (ii)   Efficient portfolio   [2]
   (iii) Efficient frontier   [2]
   (iv)   Optimal   [2]
   (v)   Characteristic line   [2]

(b)   By 2005, after 2 years of frenzied merger activity, only two giant conglomerates remain on the Zimbabwe Stock Exchange, A and B. Each accounts for half the value of the market portfolio. You are given the following data:

	FIRM A	FIRM B
Expected rate of return(r)	23	13
Standard deviation of Return ((σ)% per year	40	24

The correlation coefficient of A and B is $\sigma_{AB} = 0.8$

   (i)   What is the expected rate of return on the market portfolio (r_m)?   [2]

   (ii)   What is the standard deviation of the market portfolio (σ_m)?   [2]

   (iii) What are the betas of stocks A and B with respect to the market portfolio?   [2]

   (iv)   Assume the risk-free rate is 10%. Are the expected rates of return on A and B consistent with the capital asset pricing model?   [4]

QUESTION 5   [20 Marks]

    (a)   What is business risk and how can it be measured? [5]

    (b)   What are some determinants of business risk?   [4]

    (c)   What is a replicating portfolio?   [2]

    (d)   Explain three types of embedded real options in capital budgeting decision-making.   [6]

QUESTION 6   [20 Marks]

(a)   Explain the three forms of EMH.   [15]

(b)   What are the implications of the EMH for financial decisions?"

     [5]