MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

FOURTH YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS ADMINISTRATION WITH INFORMATION TECHNOLOGY

MAIN CAMPUS

ABA 420: CORPORATE FINANCE

Date: 27th July, 2017 Time: 12.00 - 3.00pm

INSTRUCTIONS:

- Answer Question ONE and any other THREE

QUESTION ONE (COMPULSORY)

Sultan Limited plans to buy a new machine. The cost of the machine, payable immediately, is Ksh.800, 000 and the machine has an expected life of five years. Additional investment in working capital of Ksh.90, 000 will be required at the start of the first year of operation. At the end of five years, the machine will be sold for scrap, with the scrap value expected to be 5% of the initial purchase cost of the machine. The machine will not be replaced.

Production and sales from the new machine are expected to be 100,000 units per year. Each unit can be sold for Ksh.16 per unit and will incur variable costs of Ksh.11 per unit. Incremental fixed costs arising from the operation of the machine will be Ksh.160, 000 per year.

Sultan Limited has an after-tax cost of capital of 11% which it uses as a discount rate in investment appraisal. The company pays profit tax one year in arrears at an annual rate of 30% per year. Capital allowances and inflation should be ignored.

Required:

a) Calculate the net present value of investing in the new machine and advise whether the investment is financially acceptable. (10 marks)
b) Calculate the internal rate of return of investing in the new machine and advise whether the investment is financially acceptable. (4 marks)
c) Explain the term 'sensitivity analysis' in the context of investment appraisal; (1 mark)
d) Calculate the sensitivity of the investment in the new machine if the following analysis is provided:

	Optimistic	Pessimistic
Selling Price	Sh. 18	Sh. 14
Variable Cost	Sh. 9	Sh. 12

Comment on your results (10 Marks)

e) Explain the financial decision making process. (5 Marks)

QUESTION TWO:

a) In evaluating investment decisions, cash flow is considered to be more relevant than profitability associated with the project. Explain why this is the case. (4 marks)

b) Maguruwe limited is considering investing KSh. 50 million on a two year project in the development of a new product. The cash flows expected to be generated by the product for the two years will depend on the level of demand which can either be high or low.

The following information relates to the expected cash flows:

1. It is estimated that there is a 66% probability of high demand in the first year with a resulting cash flow of KSh. 25 million. In the second year Cash flows would increase to KSh. 33 million. If demand is still high with a probability of 45%, otherwise they would reduce to KSh. 18 million if is low.
2. If the demand in the first year is low then the cash flow would be expected to be KSh. 5 million, however in the second year the cash flows would increase to KSh. 15 million if the demand is high with a probability of 41 %. If the demand is still low in the second year then the cash flows would remain at KSh. 5 million.

Plaza Limited's cost of capital is 13 % per annum.

Required:

i. Draw a decision tree to represent the above scenario. (3 marks)
ii. Using suitable calculations, advice the company on whether to invest in the project. (10 marks)
iii. Determine the probability that the project's net present value (NPV) will be negative. (3 marks)

QUESTION THREE:

a) Explain the factors that influence the dividend policy if a firm. (10 marks)

b) Explain the similarities and distinction between Stock splits and Stock dividends. (10 Marks)

QUESTION FOUR:

a) Tunukiwa Limited is considering replacing production machinery at its Mambugo plant. The existing machinery at the plant was purchased three years ago at a cost of Kshs. 40 million. It is expected to have a useful life of five more years with a scrap value of Ksh 500,000 at the end of this period. The machine could be disposed of immediately with net proceeds of Kshs. 20 Million after tax. The new machinery will cost Ksh 80 million, with a useful life of five years and expected terminal value of Kshs. 5 million. With the introduction of the new machinery, sales are expected to increase by Kshs.20 million per annum over the next five years. Variable costs are 70 percent of sales and the corporate tax rate is 30 percent per annum. Operation of the new machinery will also require an investment of Ksh. 6 million in working capital which will be recovered at the end of its useful life. Installation cost of the new machinery will amount to Kshs. 3 million.

Assume capital allowances are to be provided for on a straight line basis and Tunukiwa Limited cost of capital is 10 percent per annum.

Required:

i) The initial cash outlay for the replacement decision. (8 marks)

ii) The annual incremental after tax operating cash flows. (8marks)

iii) The NPV of the replacement decision and advice Mamba limited on whether to replace the machinery. (4 marks)

QUESTION FIVE:

a) An investor has an investment fund of KSh.1, 000,000. He intends to appropriation this fund into two securities, A and B as follows; Sh.200,000 in security A and Sh. 800,000 in security B. The returns on each security are dependent on the state of the economy as follows.

State	Probability	Return on A	Return on B
Boom	0.4	18%	24%
Average	0.5	14%	22%
Recession	0.1	12%	21%

Required:

i) Expected Return on the portfolio. (4 marks)

ii) Expected Risk on each Security.(4 marks)

b) An investor expects a risk free rate of 4.5% per annum and a market rate of return of 14.5% p.a.

Two stocks, A and B have the following betas and estimated returns:

Stock	Beta	Estimated return
A	1.2	16%
B	0.8	14%

Required;

i) Assuming Stock A and B fairly valued under the capital asset pricing model (CAPM) use a sketch graph to indicate the points where the stocks would be plotted on the security market line.(SML) (7marks)

ii) State whether stock A and B are undervalued or overvalued. (3 marks)

c) Distinguish between systematic and unsystematic risk. (2 marks)