AFRICA UNIVERSITY

(A United Methodist-Related Institution)

"Investing in Africa's Future"

FACULTY OF MANAGEMENT AND ADMINISTRATION

COURSE TITLE: MAC 403, FINANCIAL MANAGEMENT 1

SEMESTER 1: FINAL EXAMINATION-DECEMBER 2014

LECTURER: MS CHIRIMA

TIME: 3 HOURS

INSTRUCTIONS

Answer **ALL questions** in section A and any three (3) in section B**.** Total possible mark is **100.**

The marks allocated to each question are shown at the end of the question.

Credit will be awarded for logical, systematic and neat presentations.

SECTION A

Discuss the following and outline the relevance of each to Financial Management:

1. Risk and Return (5 marks)
2. Portfolio (5 marks)
3. Capital Asset Pricing Model (5 marks)
4. Rationale Expectations Theory (5 marks)
5. Agency Theory (5 marks)

SECTION B

Select and answer ANY THREE from the following questions:

QUESTION 1 (25 marks)

PV Co is evaluating an investment proposal to manufacture Product W33, which has performed well in test marketing trials conducted recently by the company's research and development division. The following information relating to this investment proposal has now been prepared.

Initial investment	\$2 million
Selling price (current price terms)	\$20 per unit
Expected selling price inflation	3% per year
Variable operating costs (current price terms)	\$8 per unit
Fixed operating costs (current price terms)	\$170,000 per year
Expected operating cost inflation	4% per year

The research and development division has prepared the following demand forecast as a result of its test marketing trials. The forecast reflects expected technological change and its effect on the anticipated life-cycle of Product W33.

Year	1	2	3	4
Demand (units)	60 000	70 000	120 000	45 000

It is expected that all units of Product W33 produced will be sold, in line with the company's policy of keeping no inventory of finished goods. No terminal value or machinery scrap value is expected at the end of four years, when production of Product W33 is planned to end. For investment appraisal purposes, PV Co uses a nominal (money) discount rate of 10% per year and a target return on capital employed of 30% per year. Ignore taxation.

Required:
(a) Identify and explain the key stages in the capital investment decision-making process, and the role of investment appraisal in this process. (8 marks)
(b) Calculate the following values for the investment proposal:
(i) Net present value (3 marks)
(ii) Internal rate of return (3 marks)

(iii) Return on capital employed (accounting rate of return) based on average investment (3 marks)
(iv) Discounted payback period. (3 marks)
(c) Discuss your findings in each section of (b) above and advise whether the investment proposal is financially acceptable.
(5 marks)

<u>QUESTION 2</u> (25 marks)

Burse Co wishes to calculate its weighted average cost of capital and the following information relates to the company at the current time:

Number of ordinary shares	20 million
Book value of 7% convertible debt	\$29 million
Book value of 8% bank loan	\$2 million
Market price of ordinary shares	\$5·50 per share
Market value of convertible debt	\$107·11 per \$100 bond
Equity beta of Burse Co	1·2
Risk-free rate of return	4·7%
Equity risk premium	6·5%
Rate of taxation	30%

Burse Co expects share prices to rise in the future at an average rate of 6% per year. The convertible debt can be redeemed at par in eight years' time, or converted in six years' time into 15 shares of Burse Co per \$100 bond.

Required:
(a) Calculate the weighted average cost of capital of Burse Co. State clearly any assumptions that you make. (12 marks)
(b) Discuss the circumstances under which the weighted average cost of capital can be used in investment appraisal. (6 marks)
(c) Discuss whether the dividend growth model or the capital asset pricing model offers the better estimate of the cost of equity of a company.
(7 marks)

<u>QUESTION 3</u> (25 marks)

FLG Co has annual credit sales of \$4·2 million and cost of sales of \$1·89 million. Current assets consist of inventory and accounts receivable. Current liabilities consist of accounts payable and an overdraft with an average interest rate of 7% per year. The company gives two months' credit to its customers and is allowed, on average, one month's credit by trade suppliers. It has an operating cycle of three months.

Other relevant information:

Current ratio of FLG Co	1·4
Cost of long-term finance of FLG Co	11%

Required:

(a) Discuss the key factors which determine the level of investment in current assets. (6 marks)
(b) Discuss the ways in which factoring and invoice discounting can assist in the management of accounts receivable. (6 marks)
(c) Calculate the size of the overdraft of FLG Co, the net working capital of the company and the total cost of financing its current assets. (6 marks)
(d) FLG Co wishes to minimize its inventory costs. Annual demand for a raw material costing $12 per unit is 60,000 units per year. Inventory management costs for this raw material are as follows:
Ordering cost: $6 per order
Holding cost: $0·5 per unit per year
The supplier of this raw material has offered a bulk purchase discount of 1% for orders of 10,000 units or more. If bulk purchase orders are made regularly, it is expected that annual holding cost for this raw material will increase to $2 per unit per year.

Required:
(i) Calculate the total cost of inventory for the raw material when using the economic order quantity. (4 marks)
(ii) Determine whether accepting the discount offered by the supplier will minimize the total cost of inventory for the raw material. (3 marks)

QUESTION 4 (25 marks)

Spot Co is considering how to finance the acquisition of a machine costing $750,000 with an operating life of five years. There are two financing options.
Option 1
The machine could be leased for an annual lease payment of $155,000 per year, payable at the start of each year.
Option 2
The machine could be bought for $750,000 using a bank loan charging interest at an annual rate of 7% per year.
At the end of five years, the machine would have a scrap value of 10% of the purchase price. If the machine is bought, maintenance costs of $20,000 per year would be incurred. Taxation must be ignored.

Required:
(a) Evaluate whether Spot Co should use leasing or borrowing as a source of finance, explaining the evaluation method which you use. (10 marks)
(b) Discuss the attractions of leasing as a source of both short-term and long-term finance. (5 marks)
(c) Discuss briefly the reasons why interest rates may differ between loans of different maturity. (5 marks)
(d) Briefly explain any two methods through which a company may obtain a listing of its shares on the stock exchange. (5 marks)

END OF PAPER