



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF BUSINESS, ECONOMICS AND ACCOUNTING

DEPARTMENT OF ACCOUNTING AND FINANCE

EXAMINATION PAPER

COURSE CODE : CAC 209
COURSE TITLE : FINANCIAL MANAGEMENT
DURATION : 3 Hours
DATE : 3 June 2019

INSTRUCTIONS TO CANDIDATES:

1. No cell phones are allowed in the examination venue.
2. Use of silent, non-programmable calculators is allowed.
3. Answer all questions.
4. Each question carries 25 marks.
5. Begin each question on a new page.
6. The number of marks for each question or part question is shown in brackets.

Question One

Part A

1. You are told that if you invest \$11,000 per year for 23 years (all payments made at the end of each year) you will have accumulated \$366,000 at the end of the period. What annual rate of return is the investment offering? **(2 marks)**
2. You are valuing an investment that will pay you \$12,000 the first year, \$14,000 the second year, \$17,000 the third year, \$19,000 the fourth year, \$23,000 the fifth year, and \$29,000 the sixth year (all payments are at the end of each year). What is the value of the investment to you now if the appropriate annual discount rate is 11.00%? **(3 marks)**
3. You are valuing an investment that will pay you \$26,000 per year for the first 9 years, \$34,000 per year for the next 11 years, and \$47,000 per year the following 14 years (all payments are at the end of each year). Another similar risk investment alternative is an account with a quoted annual interest rate of 9.00% with monthly compounding of interest. What is the value in today's dollars of the set of cash flows you have been offered? **(5 marks)**

Part B

Tan Ltd, a multi-product company, is considering four investment projects, details of which are given below. Development costs already incurred on the projects are as follows.

A	B	C	D
\$	\$	\$	\$
100,000	75,000	80,000	60,000

Each project will require an immediate outlay on plant and machinery, the cost of which is estimated as follows.

A	B	C	D
\$	\$	\$	\$
2,100,000	1,400,000	2,400,000	600,000

In all four cases the plant and machinery has a useful life of five years at the end of which it will be valueless. Unit sales per annum, for each project, are expected to be as follows.

A	B	C	D
150,000	75,000	80,000	120,000

Selling price and variable costs per unit for each project are estimated below.

	A	B	C	D
	\$	\$	\$	\$
Selling price	30.00	40.00	25.00	50.00
Materials	7.60	12.00	4.50	25.00
Labour	9.80	12.00	5.00	10.00
Variable overheads	6.00	7.00	2.50	10.50

The company charges depreciation on plant and machinery on a straight line basis over the useful life of the plant and machinery. Development costs of projects are written off in the year that they are incurred. The company apportions general administration costs to projects at a rate of 5% of selling price. None of the above projects will lead to any actual increase in the company's administration costs. Working capital requirements for each project will amount to 20% of the expected annual sales value. In each case this investment will be made immediately and will be recovered in full when the projects end in five years' time. Funds available for investment are limited to \$5,200,000. The company's cost of capital is estimated to be 18%.

Required:

- i. Calculate the NPV of each project. (12 marks)
- ii. Calculate the profitability index (P.I) for each project and advise the company which of the new projects, if any, to undertake. You may assume that each of the projects can be undertaken on a reduced scale for a proportionate reduction in cash flows. Your advice should state clearly your order of preference for the four projects, what proportion you would take of any project that is scaled down, and the total NPV generated by your choice (3 marks)

[Total: 25 marks]

Question Two

Part A

Consider the information below relating to the annual rates of return for two companies X and Y over a period of 4 years:

Year	X	Y
	Rate of return %	Rate of Return %
1	-4.76	-4.75
2	5.34	7.65
3	12.09	6.98
4	-2.98	9.65

Required:

Calculate the mean and covariance per year between the two companies. (5 marks)

Part B

An investor is considering two investments and can only invest in either the shares of Company X or in the shares of Company Y. The following information regarding returns and probability distributions of returns is relevant:

SHARE X		SHARE Y	
<i>Probability</i>	<i>Return (%)</i>	<i>Probability</i>	<i>Return (%)</i>
0.20	10	0.20	0
0.60	15	0.30	10
0.20	20	0.30	20
		0.20	30

Required:

- i. Calculate the expected return of X and Y (2 marks)

- ii. What is the co-efficient of variation for each share? (3 marks)
- iii. Which share will you recommend and why? (2 marks)
- iv. How would your investment decision change if share Y offering a probability of 20% for a return of 30% had a return of 40% instead of a return of 30% (3 marks)

Part C

- i. State any three assumptions upon which the capital asset pricing model is based and explain their limitations. (7 marks)
- ii. With an aid of a diagram, explain what is meant by the efficient frontier. (3 marks)

[Total: 25 marks]

Question Three

1. Critically discuss the objectives of financial management, clearly bringing out which is the main objective. (5 marks)
2. Explain the role of a finance manager in a public company indicating how his/her role is different from that of a financial accountant and a management accountant. (5 marks)
3. Discuss the factors that influence investment decisions. (5 marks)
4. Under what circumstances do the net present value (NPV) and internal rate of return (IRR) methods differ? Which method would you prefer and why? (5 marks)
5. Do the NPV and Profitability Index (PI) always lead to the same investment decision? Discuss. (5 marks)

[Total: 25 marks]

Question Four

An investor who is interested in investing \$1,000,000 in the mining sector of a stock exchange has approached you for an advice on investment opportunities in the sector. You have gathered data and assigned probabilities to expected returns under four possible market

conditions. The following probabilities have been assigned to two individual shares namely Gold and Diamond as well as the market.

Market condition	Probability	% Expected returns		
		GOLD	DIAMOND	MARKET
Poor	0.2	-10	10	-5
Moderate	0.3	5	10	15
Good	0.4	30	15	25
Exceptionally Good	0.1	45	20	35

The beta of the market is 1 and borrowing and lending is possible at the risk-free rate of 10%.

Required:

- a. Calculate the expected return, standard deviation, and co-efficient of variation for each of Gold and Diamond and advise the investor on the company to invest in; **(7 marks)**
- b. Calculate the correlation co-efficient for the returns from Gold and Diamond and advise on whether it will be wise to invest in a portfolio of Gold and Diamond. **(5 marks)**
- c. Calculate the beta of Gold and Diamond; **(5 marks)**
- d. Calculate the expected return and total risk of the portfolio consisting of an investment of \$200 000 of Gold and \$800 000 of Diamond; **(5 marks)**
- e. State assumptions used in developing the capital asset pricing model **(3marks)**

[Total: 25 marks]

*****END OF EXAMINTION PAPER*****