



**National University of
Science and Technology**
Think in Other Terms



**FACULTY OF COMMERCE
DEPARTMENT OF FINANCE
BACHELOR OF COMMERCE HONOURS DEGREE IN ACCOUNTING, ACTUARIAL
SCIENCE, BANKING, FINANCE, FISCAL STUDIES, HUMAN RESOURCES
MANAGEMENT, MANAGEMENT, MARKETING MANAGEMENT, AND RISK
MANAGEMENT & INSURANCE
PART II 1ST SEMESTER FINAL EXAMINATION – DECEMBER 2015**

CORPORATE FINANCE I [CFI 2101]

TIME ALLOWED: 3 HOURS

INSTRUCTIONS TO CANDIDATES

1. Answer any **FOUR (4)** questions.
2. Show all workings.
3. Write neatly and legibly.
4. Use a degree of accuracy of 2-decimal places in the final answer

INFORMATION FOR CANDIDATES

1. This paper contains **SIX (6)** Questions.
2. Each full question carries a total of **25 marks** and part marks are indicated in brackets at the end of each part question.
3. This paper contains **SIX (6)** printed pages including the cover page.
4. Candidates may write on the question paper but shall not write in the answer booklet during reading time.

QUESTION ONE [25 MARKS]

- a) Contrast the objective of maximizing earnings with that of maximizing wealth
[10-marks]
- b) Describe with practical examples from Zimbabwe, how the agency problem may manifest in public sector enterprises.
[15-marks]

QUESTION TWO [25 MARKS]

- a) Mahatshula Corporation has issued bonds that have a 9 percent coupon rate, payable semiannually. The bonds mature in 8 years, have a face value of \$1000, and a yield to maturity of 8.5 percent. What is the fair price of the bonds?
[5-marks]

- b) Assume that the average firm in the Agro-Industrial sector of firms listed on the ZSE is expected to grow at a constant rate of 6 percent and its dividend yield is 7 percent. Company XYZ-Farm Implements Inc. is about as risky as the average firm in the industry, but it has just successfully completed some groundbreaking Research & Development work that leads you to expect that its earnings and dividends will grow at a rate of 50 percent [$D_1 = D_0 (1 + g) = 1.50$] this year and 25 percent the following year, after which growth should match the 6 percent industry average rate. The last dividend paid (D_0) was \$1.

What is the value per share of XYZ-Farm Implements Inc.? [5-marks]

- c) Chiname-Chikaza Corporation (CCC) issued preferred stock with a stated dividend of 10 percent of par. Preferred stock of this type currently yields 8 percent, and the par value is \$100. Assume dividends are paid annually.
- What is the value CCC's preferred stock? [4-marks]
 - Suppose interest rate levels rise to the point where the preferred stock now yields 12 percent. What would be the value of CCC's preferred stock? [4-marks]
- d) Evaluate the relevance of the Myron-Gordon dividend growth models in valuing shares in Zimbabwe. [7-marks]

QUESTION THREE [25 MARKS]

- a) You have been asked by the managing director of your company to evaluate the proposed acquisition of a spectrometer for the company's Research and Development department. The equipment's base price is \$140 000 and it would cost another \$30 000 to modify it for special use by your firm. The spectrometer would be sold after 3 years for \$60 000, depreciation would be:

Year 1	Year 2	Year 3	Year 4
33%	45%	15%	7%

Use of the equipment would require an increase in net operating working capital of \$8000 (spare parts inventory). The spectrometer would have no effect on revenues, but it is expected to save the firm \$50 000 per year in before tax operating costs, mainly labour. The applicable tax rate is 40%

Required

- i. Calculate the initial cash outlay [3 marks]
 - ii. What are the net operating cash flows in years 1, 2, and 3? [6-marks]
 - iii. What is the terminal cash flow? [3 marks]
- b) "Operating cash flows rather than accounting profits are used in capital budgeting". What is the basis for this emphasis on cash flows as opposed to net income? [3 marks]
- c) Explain why sunk costs should not be considered in a capital budgeting analysis whereas opportunity costs and externalities are included. [4 marks]
- d) Define the following terms in relation to capital budgeting:
- i. Sensitivity analysis [2-marks]
 - ii. Scenario analysis [2-marks]
 - iii. Monte Carlo Simulation [2-marks]

QUESTION FOUR [25 MARKS]

- a) Valentine Engineering is considering the purchase of two pieces of equipment, a truck and an overhead pulling system. The projects are independent. The cash outlay for the truck is \$17 100 and that for the pulley system is \$22 430. The firm's cost of capital is 14 percent. After tax profits (if they include depreciation) are as follows:

Year	Truck	Pulley
1	\$5 100	\$7 500
2	\$5 100	\$7 500
3	\$5 100	\$7 500
4	\$5 100	\$7 500
5	\$5 100	\$7 500

Calculate indicating for each project the correct accept/ reject decision

- i. Net present value [4 marks]
 - ii. Internal rate of return [4 marks]
 - iii. Modified internal rate of return [3 marks]
 - iv. Profitability index [2 marks]
- b) With the aid of a diagram, explain the source of conflict between the net present value and the internal rate of return in evaluating projects [3 marks].
- c) Under what circumstances might the modified internal rate of return give a more reliable measure compared to the internal rate of return [3 marks].
- d) State 3 reasons why firms undertake capital budgeting in a firm [3 marks].
- e) With the aid of examples, explain the difference between a call and a continuous market [3 marks]

QUESTION FIVE [25 MARKS]

- a) Currently, the risk-free rate is 10 percent and the expected return on the market portfolio is 15 percent. Market analysts' return expectations for four stocks are listed here, together with each stock's expected beta.

Stock	Expected Return	Expected Beta
A	17%	1.3
B	14.5	0.8

C	15.5	1.1
D	8	1.7

- i. If the analysts' expectations are correct, which stocks are overvalued, undervalued or correctly priced [5-marks]
- ii. If the risk-free rate were suddenly to rise to 12 percent and the expected return on the market portfolio to 16 percent, which stocks (if any) would be overvalued? Which (if any) undervalued? (Assume that the market analysts' return and beta expectations for the four stocks stay the same.) [5-marks]
- b) A two-asset portfolio consists of stock A and stock B with expected returns and standard deviations given below:

	E (R)	σ
Common Stock A	0.10	0.05
Common Stock B	0.06	0.04

The expected correlation coefficient between the two stocks is -0.35 .

Compute the risk and return for a portfolio comprising 60 percent invested in stock A. [10-marks]

- c) Explain with the aid of a diagram the relationship between idiosyncratic and market risk. [5-marks]

QUESTION SIX [25 MARKS]

- a) Briefly describe the three forms of the efficient market hypothesis. [9-marks]
- b) Mr. Mungwini is considering purchasing a supermarket at Lupane growth point in Matabeleland North Province as a going concern. You have gathered the following details about the supermarket:
- Current operating cash flows are at \$70 000 per annum, and expected to grow at a rapid 20% per annum for three years
 - After the three years, the growth rate will level off to 5% per annum due to intensification of competition
 - An equity beta of 1.2 is considered appropriate for the supermarket, and Mr. Mungwini has no intention to leverage his investment
 - The rate of return on Government Bonds averages 3%, and the market risk premium is 10%

If the current owner is selling the supermarket for \$850 000, should Mr Mungwini purchase it? Explain. [10-marks]

c) Provide three reasons why a firm might decide to delist on an exchange [3- marks]

d) Give three reasons why firms opt for dual listing [3-marks]

END OF EXAMINATION PAPER