National University of Science and Technology

Think in Other Terms

FACULTY OF COMMERCE

DEPARTMENT OF FINANCE

BACHELOR OF COMMERCE IN FINANCE

PART IV 1ST SEMESTER FINAL EXAMINATION–DECEMBER 2015

INSTITUTIONAL INVESTMENT ANALYSIS [CFI 4103]

TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. Answer **ALL** Questions in Section A
2. Choose **THREE** Questions in Section B
3. Write neatly and legibly.

INFORMATION FOR CANDIDATES

1. This paper contains **SIX (6)** Questions.
2. Questions in Section A carry **2 marks** each.
3. Questions in Section B carry a total of **20 marks** each.
4. This paper contains **NINE (9)** printed pages, including cover page.
5. The businesses and persons in this question paper are intended to be fictitious.

QUESTION ONE: SECTION A (40 MARKS)

Write a letter which corresponds to the correct answer

i. Assume that at the end of next year, Fourock Enterprises will pay a $2.00 dividend per share, an increase from the current dividend of $1.50. After that, the dividend is expected to increase at a constant rate of 5%. If you require a 12% return on the stock, what is the value of the stock?
   a. $28.57
   b. $28.79
   c. $30.00

ii. The constant growth dividend discount model would typically be most appropriate in valuing the stock of a:
   a. New venture expected to retain all earnings for several years
   b. Rapidly growing company
   c. Moderate growth, “mature” company

iii. Two companies are identical except for substantially different dividend payout ratios. After several years, the company with the lower dividend payout ratio is most likely to have
   a. Lower stock price
   b. Less rapid growth of earnings per share
   c. More rapid growth of earnings per share

iv. A basic assumption of technical analysis in contrast to fundamental analysis is that:
   a. Financial statements provide information crucial in valuing a stock
   b. A stock’s market price will approach its intrinsic value over time
   c. Security prices move in patterns which repeat over longer periods

v. The semi-strong form of the efficient market hypothesis asserts that stock prices:
   a. Fully reflect all historical security market information
   b. Fully reflect all public information
   c. Fully reflect all relevant information from public to private sources

vi. An investor whose portfolio is located on the capital market line to the left of the market portfolio most likely has:
   a. Lower systematic risk than the market portfolio
   b. Higher unsystematic risk than the market portfolio
   c. Less than 100% of his wealth invested in the market portfolio

vii. All else equal, as the correlations of returns among a set of securities increases, will a portfolio composed of those securities most likely experience an increase in expected:

	Return?	Risk?
a.	No	No
b.	No	Yes
c.	Yes	No

viii. A portfolio manager wishes to purchase 100 share of Delta Corporation if the stock price trades at or below 11c per share in the next two weeks. The current price is 14c per share. The manager will place which type of an order?

a. Short sale
b. Limit order
c. Market order

ix. An investor requires 100 share of BP Amoco at a price of $70 per share using 50% margin. If the price of the share increases 15%,the total market value of the position is:

a. $4 450 and the investor's equity is $3 500
b. $8 050 and the investor's equity is $3 500
c. $8 050 and the investor's equity is $4 550

x. An investor purchased on margin 100 shares of stock priced at $30 per share. The investor borrowed the maximum amount allowed by the initial margin requirement of 50%. If the maintenance margin is 25%, the lowest price per share at which could sell before the investor would receive a margin call is closet to

a. $12.00
b. $20.00
c. $22.50

xi. Regarding the three step valuation process (top–down approach), the most appropriate sequence of steps is

a. Industry influences, general economic influence and ,and company analysis
b. Company analysis, general economic influences and, industry influences
c. General economic influences, industry influences and company analysis

xii. An investor purchases a preferred stock with a annual dividend of $3.30 and a required rate of return of 6%. If the risk free rate is 3%, the value of the preferred stock is closest to:

a. $36.67
b. $50.00
c. $110.00

xiii. An analyst made the following statement: “Our staff economic has predicted a down turn so we should position our portfolios in stocks of defensive companies. Defensive companies have earnings that are likely to hold up in an economic downturn. Examples of companies that we should hold are steel and machinery companies.” Is the analyst’s statement correct with respect to?

	Defensive companies’ earnings in downturn	Example of defensive companies
a.	No	No
b.	No	Yes
c.	Yes	No

xiv. An analyst made the following statement: “Compared to price to earnings ratios, price to sales and price to cash flows ratios are generally less subject to distortion or manipulation.”
The analyst’s statement is correct with respect to:
a. Price to sales ratio but not price to cash flows ratio
b. Price to cash flows ratio but not price to sales ratio
c. Both price to sales ratio and price to cash flow ratio

xv. McDonald’s Corp. has a current market value of $44 per share. The earnings per share (EPS) reported in the last year was $2.02. The expected EPS for the current year is $2.42 and for the next year its $2.68. McDonald’s forwards P/E ratio is closest to:
a. 16.42
b. 18.18
c. 21.78

xvi. “The sale of a security with a commitment by the seller to purchase the same back at a specified price at a designated future date” best describes:
a. Prepayment risk
b. A repurchase agreement
c. An adjusted price issue

xvii. The provision of a sinking fund in bond redemption is most likely to
a. Reduce default risk
b. Never allow issuers to retire more than the sinking fund requirement

c. Always reduces the outstand balance of the bond issue to zero prior to maturity

xviii. An analyst stated that an amortizing security typically has more reinvestment risk and interest rate risks than an otherwise identical zero coupon bonds. The analyst's statement most likely is:

a. Correct with respect to both reinvestment risk and interest rate risk
b. Incorrect with respect to reinvestment risk but correct with respect to interest rate risk
c. Correct with respect to reinvestment risk but incorrect with respect to interest rate risk

xix. An analyst made the following statement: "We expect interest rate to be very volatile for the foreseeable future. I think we should buy floating rate securities because they have less interest rate risk than fixed rate securities and their price will always reset to par value." Is the analyst's statement most likely correct with respect to:

	Relative interest rate risk?	Price reset?
a.	No	No
b.	No	Yes
c.	Yes	No

xx. Which of the following is least likely an example of an asset backed security?

a. Commercial paper
b. Collateralized debt obligations
c. Mortgage pass-through securities

SECTION B: CHOOSE THREE QUESTIONS

QUESTION TWO

a) Define a marketable limit order. **[2 marks]**

b) An analyst at Legg Mason Capital bought a Vanguard share at $40. The analyst believes that the Silicon Valley based company's share price will fall below the purchase price in the future.

She gives her broker a GTC, stop 35 and limit 25 sell order. Interpret the meaning of the order given by the analyst. **[3 marks]**

c) A manager believes that a security is undervalued but is unwilling to trade without market confirmation. The stock currently trades for $5 a share and the manager believes it should be worth $10. He also believes that it will most likely be worth $10 if other traders are willing to buy it at above $7. To take advantage of this information, what type of an order will the manager issue? **[3 marks]**

d) Distinguish between shelf registration and private placement. **[4 marks]**

e) Why is P/S ratio considered a better measure in the method of comparables compared to P/E ratio during economic recessions and recoveries? **[4 marks]**

f) An analyst gathered the following information about four stocks:

Common Stock	Beta
GZU	0.9
MSU	1.0
CUT	1.1
UZ	1.2

The expected risk free rate of return is 4 percent and the market risk premium is 8 percent.

With respect to the security market line, if all four stocks have the same estimated annual return of 12.8 percent, determine which stocks are overvalued and undervalued. **[4 marks]**

Total [20 marks]

QUESTION THREE

a) The Index Model for mining stocks RioZim and Falgold is estimated using the following results

$$R_R = 1.0\% + 0.9\ R_M + e_R$$

$$R_F = -2.0\% + 1.1\ R_M + e_F$$

Given that the standard deviation of the market is 20% while firm specific risk for RioZim and Falgold is 30% and 10% respectively, find the standard deviation and the covariance between them. **[9 marks]**

b) What is the duration of a 5 year coupon paying bond trading at par, YTM of 10% compounded semiannually and par value of $1 000? **[5 marks]**

c) Interpret the meaning of bond duration. **[2 marks]**

d) Explain the price discovery role of financial markets **[4 marks]**

Total [20 marks]

QUESTION FOUR

a) What is the relationship between market depth and price continuity? **[4 marks]**

b) Explain how the current liquidity crisis in Zimbabwe is affecting the performance of the Zimbabwe Stock Exchange. **[4 marks]**

c) If markets are efficient, why do investors value shares? **[5 marks]**

d) An investor is considering investing in a small–cap fund and a general bond fund. Their returns and standard deviations are given below and the correlation between the two fund returns is 0.10.

	Expected Return	Standard Deviation of Returns
Small-cap fund	19%	33%
Bond fund	8%	13%

i. If the investor requires a portfolio return of 12%, what should the proportions in each fund be? **[3 marks]**

ii. What is the standard deviation of the portfolio constructed in i) above? **[4 marks]**

Total [20 marks]

QUESTION FIVE

a) A portfolio has an expected rate of return of 20% and standard deviation of 20%. Treasury Bills offer a sure rate of return of 7%. Given that the investors risk aversion coefficient is 4, justfy which investment alternative will be chosen by the investor? **[3 marks]**

b) Discuss the overall purpose of investing. **[3 marks]**

c) "Young man with little wealth should not invest money in risky assets such as the stock market, because they can't afford to lose what little money they have". Discuss. **[4 marks]**

d) The underlying is a stock index and is at 5 601.19 when the options expire. The multiplier is 500. Determine the payoffs of calls and puts when the exercise price is:

   i. 5 500 **[2 marks]**

   ii. 6 000 **[2 marks]**

e) The expected dividend for Creyke Holdings is $5.00. The company's ROE is 25% and it retains 40% of its earnings. This scenario is expected to continue for three years and the growth rate moves to 5% thereafter. The required rate of return is 15%. Estimate the intrinsic value of Creyke stock. **[6 marks]**

Total [20 marks]

QUESTION SIX

a) Chris Smith of XYZ Pension Plan has historically invested in the stocks of only U.S.-domiciled companies. Recently, he has decided to add international exposure to the Plan portfolio.

   Identify and briefly discuss *two* potential risks that Smith is adding to the portfolio in selecting international stocks. **[4 marks]**

b) Discuss the business cycle approach to investment timing. **[8 marks]**

c) You open an investment account with a brokerage firm and purchase 200 shares of Oasis Investment Bank at $50 per share on margin. You borrow $3 000 from the broker at a call rate of 5% per annum.

   i. What is the initial margin in your account? **[1 marks]**

   ii. If the share price falls by 30% by the end of the year, what will be the margin in your account by year end? **[2 marks]**

   iii. If the maintenance margin is 30%, at what price will you receive a margin call from your broker? **[2 marks]**

   iv. Assuming that Oasis Investment Bank pays a dividend of $0,40 per share, what will be the rate of return on your investment? **[3 marks]**

Total [20 marks]

END OF EXAMINATION PAPER