CHUKA UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION

MSEC 833: INVESTMENT FINANCE

STREAMS: MBAD (Y2S1) TIME: 3 HOURS

DAY/DATE: FRIDAY 07/12/2018 2.30 P.M. – 5.30 P.M.

INSTRUCTIONS: Answer question ONE and any other THREE questions

QUESTION ONE (40 MARKS)

(a) An investor can be distinguished from a speculator by risk bearing capacity, return expectations, and duration of trade. Explain [6 marks]

(b) Explain the term security analysis and describe two approaches to security analysis [8 marks]

(c) The fact that not the entire risk of a portfolio can be diversified away, no matter how many securities are included, makes it possible to classify risk in two categories – systematic and non-systematic risk. Discuss two sources of systematic and unsystematic risk [6 marks]

(d) Explain the meaning of a portfolio revision and distinguish between active and passive portfolio revision strategies [6 marks]

(e) The following is data on return risk characteristics of three risky securities P, Q and R

	P	Q	R	Corr.
Expected return %	25	22	20	
Standard deviation %	30	26	24	
Correlation				
PQ				-0.5
QR				0.4
PR				0.6

An investor is contemplating putting his wealth in equally weighted portfolios. Which of the combination PQ, PR, RQ and PRQ would yield lowest risk? [6 marks]

(f) During the past 10 year period, the average annual rate of return on the NSE (Market portfolio) was 14% and the average annual rate of return on a 363 day T-bill was 8%. As an administrator of a large pension fund, you are indifferent on whether to renew investment contract with each of the three fund managers that are currently offering investment service to the pension fund. You have gathered the following information:

Investment manager	Average annual rate	Beta of the portfolio	Standard deviation of the portfolio
W	12%	0.90	1.8%
X	16%	1.05	2.2%
Y	18%	1.20	2.3%

The standard deviation of the market portfolio is 2%

Required: evaluate the performance of the managers using Sharpe, Treynor and Jensen measures [8makrs]

QUESTION TWO

(a) Explain the following terms as used in financial markets

(i) Debt market [2 marks]

(ii) Secondary market [2 marks]

(iii) Spot market [2 marks]

(b) (i) Use Black-Scholes Model to calculate the value of a call option given the following information:

Current market price of the share sh. 100

Historical standard deviation 0.4

Exercise price sh. 95

The current annualized market interest rate for T-bills 10%

Time remaining before expiration 3 months [5 marks]

(ii) Suppose analysts expect an increase in stock's beta because of new debt issue. As a result, the expected standard deviation will be 0.5. Determine the proportion of change in the option value [4 marks]

(c) An investor holds 5000 shares in ICDC ltd, a listed company at NSE. ICDC has been paying average dividends of sh. 2 per share per annum in recent years. The dividends are expected to grow at a rate of 15% p.a over the coming 3 years, then at a rate of 10% over the next three years and financially at a rate of 5% p.a to perpetuity. The required rate of return is 9%

Required: calculate the current value of the shareholding in ICDC ltd, using the dividend growth model [5 marks]

QUESTION THREE

(a) Explain price risk and reinvestment risk under bond investment [6 marks]

(b) Calculate the duration for bond A and bond B with 7 per cent and 8 per cent coupons respectively having maturity period of 4 years. The face value of each bond is sh. 1000 and both bonds are currently yielding 6 per cent. What conclusion can you make regarding size of coupon payments and bond duration [6 marks]

(c) An investor is evaluating three portfolios with the following characteristics:

Portfolio	Portfolio estimated return %	Portfolio Beta
1	10%	1.2
2	14%	0.8
3	13.5%	0.9
4	12.5%	0.6

The expected return on the market portfolio is 14.5%. The risk free rate of interest is 4.5%

Required: Basing on a suitable equilibrium model, advice on which among the above portfolios are suitable candidates for buying

QUESTION FOUR

(a) Distinguish between European and American call option [4 marks]

(b) In line with its strategic objectives, the Nairobi Securities Exchange is in the process of establishing a global competitive futures exchange that will enable spot and futures trading of multi-asset classes including currency, equities, interest rate products (bond market) and other varied forms of financial contracts. What benefits do investors stand to gain from the futures market? [5 marks]

(c) As a member of investment committee for ABC ltd, you are considering investing in a bond currently selling for shs. 8785.07 on the bond market. The bond has a face value of shs. 10,000, four years to maturity and 8% coupon rate. The next annual interest payment is due one year from today. The approximate discount factor for investments of similar risk is 10%. Calculate the intrinsic value of the bond and advice whether the bond should be purchased [5 marks]

(d) Two portfolios were constructed at the end of January 2015, one consisting of ordinary shares and the other consisting of corporate bonds. The ordinary shares at the time of constructing the portfolio were 1200 shares at a rate of sh. 100 per share while the bonds (defensive portfolio) were values at sh. 80,000. The investor opts to use constant value plan strategy for portfolio revision and fixes a revision point of 10%. At the time of portfolio construction, the market price per share was sh. 100. The share prices show fluctuations at the end of the month as shown under:

Month	Market price per share sh.
February	90
March	85
April	75
May	80
June	95

Determine the total portfolio value after revision at the end of June [6 marks]

QUESTION FIVE

(a) Explain the purpose for maintenance margin and variation margin in futures trading

[4 marks]

(b) In late June 2014, Martin purchased two August silver futures contacts. Each contract size is 5,000 ounces of silver and the futures price on the date of purchase was USD 18.62 per ounce. The initial margin required was USD 6,000 and a maintenance margin of UDS 4500. You are given the following price history for the August silver futures:

Day	Futures price (USD)
29 June 2014	18.62
30 June 2014	18.69
01 July 2014	18.03
02 July 2014	17.72
06 July 2014	18.00
07 July 2014	17.70
08 July 2014	17.60

Required:

(i) The days which on which Martin receive a margin call [5 marks]

(ii) The balance in Martin's account at the end of July 8 [5 marks]

(c) Write notes on the following bond investment concepts

(i) Yield to maturity [2 marks]

(ii) Bond immunization [2 marks]

(iii) Bond duration [2 marks]
