



**STRATHMORE BUSINESS SCHOOL**  
**BACHELOR OF FINANCIAL SERVICES**  
**FSE 3102: INVESTMENT AND PORTFOLIO ANALYSIS**  
**END OF SEMESTER EXAMINATION**

**Date:** Wednesday 3<sup>rd</sup> August 2022

**Time:** 2 hours

**Instructions:**

**Answer Question 1 & any other 2 Questions**

**QUESTION 1**

- (a) Describe 5 investment vehicles that an investor can employ in Kenya **(5 marks)**
- (b) Describe the criteria for investment evaluation **(5 marks)**
- (c) Describe an individual investor's life cycle **(5 marks)**
- (d) Describe the portfolio management process **(5 marks)**
- (e) The rates of return and risks for 3 firms were as follows:

<b>Firm</b>	<b>Return</b>	<b>Risk (std dev)</b>
A	15%	16%
B	13%	18%
C	12%	11%

Risk free rate was 7%

**Required:**

Rank the 3 firms based on the Sharpe's index.

**(3 marks)**

(f) The rates of return and risks for 3 firms were as follows:

<b>Firm</b>	<b>Return</b>	<b>Risk</b>	<b>Bets</b>	<b>Risk free rate</b>
A	15%	16%	1.15	7%
B	13%	18%	1.25	7%
C	12%	11%	0.9	7%

**Required:**

Rank the 3 firms based on the Treynor's index **(3 marks)**

(g) The rates of return and risks for 4 stocks were as follows:

<b>Firm</b>	<b>alpha</b>	<b>bet</b>
W	1.0	0.9
X	1.25	1.25
Y	1.07	1.15
Z	1.15	0.85

**Required:**

Rank the 3 firms based on the Jensen's performance **(4 marks)**

**(Total 30 marks)**

## QUESTION 2

Company X announced a profit warning on day 0 and the stock X return and market return data surrounding the event announcement was as follows:

<b>Days</b>	<b>Market return (R<sub>m</sub>)</b>	<b>Stock X return (R<sub>x</sub>)</b>
-8	0.26	0.4
-7	-0.12	-0.14
-6	0.32	0.5
-5	0.38	0.54

-4	-0.16	-0.14
-3	0.2	0.34
-2	-0.1	-0.09
-1	0.16	0.26
0	0.2	0.3
1	-0.11	-0.1
2	0.08	0.15

**Required:**

- (a) Develop market prediction model to derive the required rate of return based on pre-event data period between day -8 and -4 **(10 marks)**
- (b) Develop the abnormal returns and cumulative abnormal returns based on the event data period between day -3 to day 2 **(4 marks)**
- (c) Plot the cumulative abnormal returns and comment on the answer **(6 marks)**

NB (i)  $Y = a + bX$  (ii)  $a = \frac{\sum y - b \sum x}{n}$  (iii)  $b = \frac{n \sum xy - \sum x \sum y}{n \sum x^2 - (\sum x)^2}$

**(Total 20 marks)**

**QUESTION 3**

Suppose empirical work reveals that expected returns on assets can be explained by 2 macroeconomic F1 and F2. Assume riskless rate to be a constant 10%. The following data shows stock X returns and the respective factors F 1 and F 2:

Prob.	A (%)	F1%	F2%
0.1	-27.615	-10	-5
0.2	35.35	-5	38.48
0.3	-4.5	25	8
0.2	-6.235	40	-1.44
0.2	30.5	50	0

**Required:**

Compute the abnormal returns from the data above and advice whether stock X should be invested in **(Total: 20 marks)**

#### QUESTION 4

Compute the return and risk as measured by standard deviation of assets A and B and compute portfolio return and risk of assets A and B where the weight distribution is 50:50

<b>Economic state</b>	<b>Probability</b>	<b>A Returns %</b>	<b>B Returns %</b>
Poor	0.10	10	20
Below normal	0.20	20	30
Normal	0.40	30	40
Above normal	0,20	35	50
Excellent	0.10	40	70

**(Total 20 Marks)**

#### QUESTION 5

- (a) Explain the differences between hedge and mutual funds **(10 marks)**
- (b) Describe 5 stock market anomalies **(5 marks)**
- (c) Describe the types of stock market efficiency tests **(5 marks)**

**(Total 20 marks)**