



ZIMBABWE EZEKIEL GUTI UNIVERSITY
FACULTY OF BUSINESS, ECONOMICS AND ACCOUNTING
DEPARTMENT OF ACCOUNTING AND FINANCE

EXAMINATION PAPER

COURSE CODE : CAC406
COURSE TITLE : INVESTMENT ANALYSIS AND PORTFOLIO
MANAGEMENT

SPECIAL REQUIREMENTS :

DURATION

LEVEL

DATE

ZIMBABWE ET
: EXAMINATIONS
: 3 Hours
: 4.1 AUG 2021
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ZIMBABWE EZEKIEL GUTI UNIVERSITY
EXAMINATIONS OFFICE

13 AUG 2021

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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 in Both Section A and Section B.
4. Begin each question on a new page.
5. The number of marks for each question or part question is shown in brackets []
6. Show all workings, where applicable.
7. Formulae sheet to be provided.

SECTION A

Answer all questions in this Section. Each question carries 2marks

Select the most appropriate answer.

1. Employment of funds with the aim of achieving additional income is known as ____
A) Investment B) Speculation C) Gambling D) Biting
2. _____ is a non – diversifiable risk.
A) Unsystematic risk B) Systematic risk C) Normal risk D) Abnormal risk
3. Which one of the following is known as indirect investment alternatives? _____.
A) Cash B) Equity shares C) Pension Fund D) Antiques
4. _____ describes the relationship between systematic risk and expected return for assets, particularly stocks
A) CAPM B) PERT C) Sharp ratio D) Treynor ratio
5. _____ analysis refers the study of the variables that influence the future of a firm both qualitatively and quantitatively.
A) Company analysis B) Industry analysis C) Technical analysis D) Economicanalysis variance
6. Labour strike, consumer preferences and management policies are making to arises out of uncertainty is known as _____.
A) Systematic B) Unsystematic risk C) Financial D) Business
7. The fundamental analysis approach has been associated with _____.
A) Uncertainties B) Certainties C) Ratios D) Balance sheet
8. The process by which one choose the securities, derivatives and other assets include in a portfolio is known as _____.
A) Portfolio selection B) Portfolio Revision C) Portfolio diversification D) None of these

9. Markowitz model presumed generally investors are

- A) Risk averse B) Risk natural C) Risk seekers D) Risk moderate

10. Investing in similar types companies of investments in a portfolio is known as _____.

- A) Horizontal diversification B) Vertical diversification C) circle diversification D) None of these

[Total 20 marks]

SECTION B

Answer ALL questions in this Section

Question One

Evaluate the following in relation to bond making reference to the economy you are familiar with:

- a) Explain the CAPM theory's propositions and the terms in its formula. [8 marks]
b) What are the practical implications of the CAPM? [5 marks]
c) What are the limitations of the CAPM? [10 marks]
d) If the risk-free rate of return is 12% and the average market return is 20%, what will be the expected return from a portfolio with a beta factor of 0.945? [2 marks]

[Total 25marks]

Question Two

Evaluate the factors affecting the level of:

- a) Analyse the Efficient Market Hypothesis and give empirical evidence relating to market efficiency in countries of your choice [15 marks]
b) Evaluate the assertion that market efficiency is marred with various anomalies. [10 marks]

[Total 25marks]

Question Three

The returns on FBC holdings and Zimbabwe Stock Exchange (Market Portfolio) and their respective probabilities are given below:

Probability	FBC holdings	ZSE
0.1	4	7
0.2	-5	0
0.1	15	14
0.3	12	6
0.3	9	13

Required Calculate

a) Average returns, variances and standard deviations of these returns

[15marks]

b) The covariance of returns between FBC holdings and ZSE.

[5marks]

c) The beta value for FBC holdings and interpret it in relation to market portfolio. [5marks]

d) Required return on FBC holdings using a risk free rate of return of 4%. [5marks]

[Total 30marks]

END OF EXAMINATION QUESTION PAPER

FORMULA SHEET FOR CAC 406 INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT

1. Bond Price = $\sum (C_n / (1+YTM)^n) + P / (1+i)^n$

Where n = Period which takes values from 0 to the n th period till the cash flows ending period,

C_n = Coupon payment in the n th period,

YTM = interest rate or required yield and

P = Par Value of the bond

2. CAPM Required return, $R_i = R_f + \beta (R_m - R_f)$.

Where R_i -required return of stock i ,

R_f - Risk free rate,

R_m -Market return rate and

β - Beta coefficient of the market

3. Beta coefficient of stock A, $\beta = \text{Cov}(r_a, r_m) / \sigma^2_m$,

Where r_a = stock A return,

R_m = Market return and

σ^2_m = Market variance

4. Correlation coefficient for Assets A and B., $R = \text{Cov}(A, B) / \sigma_a \sigma_b$

Where σ_a = Standard deviation of stock A and

σ_b = Standard deviation of Stock B.

5. Covariance for stock A and B, $\text{Cov}(a,b) = \sum p_i (r_a - E(r_a))(r_b - E(r_b))$

or $\sum (r_x - \bar{X})(r_y - \bar{Y}) / (n - 1)$

6. Expected return of stock X, $E(r) = \sum px$ or $\sum x/n$

where p = probability of economic state,

x = return of each economic state and

n = number of items.

7. Sharpe's ratio = $(R_p - R_f) / \sigma_p$

where σ_p = standard deviation of the portfolio,

R_p = return on portfolio and

R_f = risk free rate.

8. Treynor's ratio = $(R_p - R_f) / \beta_p$ where β_p = beta of portfolio.

9. Jensen's alpha = $R_i - ((R_f + \beta_p (R_m - R_f)))$

10. Duration = $\sum (t \times PV) / \sum PV$

where t = time and

PV is the present value of the cashflows.

11. Variance of stock A, $\sigma_A^2 = \sum p_i (r_i - E(r))^2$

12. Portfolio variance, $\sigma_{ab}^2 = w_a^2 \sigma_a^2 + w_b^2 \sigma_b^2 + 2w_a w_b \text{COV}_{ab}$

or $w_a^2 \sigma_a^2 + w_b^2 \sigma_b^2 + 2w_a w_b \sigma_a \sigma_b r_{ab}$