BINDURA UNIVERSITY OF SCIENCE EDUCATION

DEPARTMENT OF STATISTICS AND MATHEMATICS

BS 203: Corporate Finance 1

Time: 3 hours

NOV 2024

Candidates may attempt ALL questions in Section A and at most two questions in Section B. Each question should start on a fresh page.

Section A (40 marks)

Candidates may attempt ALL questions being careful to number them A1 to A4.

A1. a). Identify non-financial factors that affect decision making. [10]

b). Distinguish between mutually exclusive projects and independent projects.[4]

c). Under what circumstances do the NPV and IRR methods agree? [2]

A2. Assume an ordinary annuity of $1000 at the end of the next 3 years.

a) What is the present value of the ordinary annuity? [2]

b) What is the future value at the end of the 3 year if cash-flows can be invested at 20% interest rate p.a effective? [2]

A3. a). Success bank advertises that investors can become millionaires in 20 years given a rate of 30.5% compounded annually. What is the annual investment that the investor should make to reach the objective of $1 million in 20 years. [4]

b) Determine the limitations of using managerial reward schemes to combat the agency problem. [6]

A4. Identify and explain any 4 Market Pricing Anomalies [10]

Section B (60 marks)

Candidates may attempt two questions being careful to number them B5 to B7.

B5. a) Use the project cash flows presented in the Table below and assume that the cost of capital is 9%.

Expected Net After-Tax Cash Flows

Year	**Cash Flow**
0	–$100
1	25
2	50
3	75

i. Compute the NPV of the project and determine whether it should be accepted or rejected. [4]

ii. Compute the IRR [4]

iii. Discuss problems associated with the IRR. [4]

b) A project is expected to have the following cash flows:

Year	**Cash flow**
	$000
0	(1,900)
1	300
2	500
3	600
4	800
5	500

What is the expected payback period? [5]

c) The company's money discount rate is 15.5%. The general rate of inflation is expected to remain constant at 5%.

Timing	**Cash flow**
	$
0	(750)
1	330
2	242

3	532

Evaluate the project in terms of:

i. money cash flows and money discount rates [5]

ii. real cash flows and real discount rates [5]

d) Identify the two types of capital rationing that is based on period. [3]

B6. a) Oxford Ltd.'s expected annual net operating income (EBIT) is $500,000. The company has $2 million worth of 10% debentures outstanding. The equity capitalization rate is 20% and there are 30,000 shares outstanding.

Required:

i. Determine the value of the firm. [6]

ii. Ascertain the value of each ordinary share capital. [2]

iii. Calculate the weighted average cost of capital of the firm. [4]

iv. Determine the likely effect on the company's weighted average cost of capital and corporate value if the company's new capital structure weights were 20% equity and 80% debt by market value. [6]

v. Recommend which of the two capital structures (current or new) should be selected. [3]

b) Evaluate any two business valuation approaches [9]

B7. a) You are given the probability distribution of returns for stock X and stock Y in Table 1 below:

Table: 1

Probability	**Returns on stock X**	**Returns on stock Y**
0.1	-10%	6%
0.3	0%	8%
0.3	8%	0%
0.2	12%	-5%
0.1	20%	17%

Required:

i. Compute the expected returns of investing in stock X and stock Y [6]

ii. Compute the standard deviations of the returns on stock X and stock Y. [10]

iii. Compute the covariance between the returns for stock X and stock Y. [6]

iv. Compute the correlation coefficient of returns of stock X and stock Y. Interpret the correlation coefficient got. [4]

b) Explain the following types of return

i. Dollar return

ii. Holding period return [4]

THE END