



Strathmore
UNIVERSITY

Strathmore Institute of Mathematical Sciences

BBS Actuarial Science

End of Semester Examination

BSA 3219: Actuarial Asset Management

DATE: 8th December 2017

TIME: 2 Hour

INSTRUCTIONS:

- 1. Answer all question 1 and any other two questions**
- 2. Question one is compulsory and carries 30 marks**
- 3. All other questions carry 20 marks each**

Question 1

a) Describe the circumstances under which money market investments may be temporarily unattractive to investors [4]

b)

(i)

State both the general formula and the simplified formula for the dividend discount model defining all the terms used. [4]

(ii)

List the assumptions underlying the simplified version of the model. [2]

[Total 6]

c) Outline reasons why the ordinary shares of two companies might trade at different price earnings ratios. [8]

d)

(i) Describe the following methods of valuing an asset:

(a) Book value

(b) Smoothed market value

(c) Discounted cash flow value

(d) Value resulting from a stochastic model

(e) Arbitrage value

[7]

(ii) Outline the circumstances in which each of the methods in (i) could be used. [5]

Question 2

An investment company is considering selling a financial product in a developed overseas market. This will be its first international venture. The company has estimated the potential cashflows in today's monetary values under a number of different scenarios as follows.

Scenario	A	B	C
Year	\$000	\$000	\$000
1	-565	-565	-565
2	180	160	100
3	210	176	100
4	240	194	80
5	240	213	70
Probability of occurrence	30%	60%	10%

- i. Explain how the real risk discount rate to be used when valuing this project should be chosen. [8]
- ii. Calculate the net present value under each scenario and the expected net present value of the project. Use a real risk discount rate of 9% p.a. and assume that the cashflows occur midway through each year. State the formulae used. [6]
- iii. Discuss the considerations which should be taken into account when deciding whether the project should proceed. [6]

[Total 20]

Question 3

A developed country has moved into recession in the last year. In order to boost growth the central bank has lowered short-term interest rates substantially over the last few months.

- (i) Discuss how economic growth, the exchange rate, and inflation in this country might develop over the next two years. [9]
- (ii) Discuss how these developments are likely to affect the level of equity and commercial property markets. [11]

[Total 26]

Question 4

(i)

Outline the main factors to consider in developing a long term investment strategy. [5]

(ii)

Comment on the specific issues likely to affect the investment strategy for the following investors:

- a. An individual who has recently received an inheritance of ten times his annual salary.
- b. A contributor to a personal pension policy.
- c. A life insurance company closed to new business, which has never written with profits business.
- d. A general insurance company.
- e. A charity.

[15]

[Total 20]

Question 5

(i) List the principal issuers of bonds. [2]

(ii) List the features of an individual corporate bond that affect its price. [6]

(iii) Describe the risks that need to be considered in corporate bond investment. [12]

[Total 20]