

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

B.COMM (ACTUARIAL SCIENCE) HONOURS DEGREE

INVESTMENT AND ASSET MANAGEMENT – CIN 4116

NOVEMBER/DECEMBER 2005 FIRST SEMESTER EXAMINATION

DURATION: 3 HOURS

Instructions to Candidates

1. Attempt ALL 17 questions, beginning each question on a new sheet.
 2. For this question paper you are permitted to have an electronic calculator (non – programmable) and actuarial tables
 3. For this question paper you have 15 minutes at the start of the examination in which to read the questions. You are strongly encouraged to use this time for reading only, but notes may be made on a rough paper. You then have three hours to complete the paper.
 4. You must not start writing your answers on the answer sheet until instructed to do so by invigilators.
 5. Mark allocations are shown in brackets.
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1. What is the principal aim of an institutional investor? **[1 mark]**
2. Given the following data, calculate the equity risk premium:
Bond yield: 5.5%
Dividend yield: 3.0%
Expected dividend growth rate: 5.3% **[2 marks]**
3. What happens to the time (option) value of an option as the expiry date approaches and why? **[2 marks]**
4. Describe briefly the two types of approach to modelling future projections of asset proceeds and liabilities outgo. **[3 marks]**
5. Explain briefly what is meant by “economic value added”, defining all the terms that you use. **[4 marks]**

6. You have been asked to value an office block that was built forty years ago. The office block was let on a 25-year lease, which now has five years remaining. The rent actually being received is substantially in excess of the “rack rent”.

- (i) Define the following terms:
 - (a) “rack rent” **[1 mark]**
 - (b) “marriage value” **[1 mark]**
- (ii) State a simple formula that you would use to value the property, defining all its parameters and listing any assumptions you would make. **[2 marks]**
- (iii) State, with reasons, the benchmark interest rate that you would use in determining the valuation rate of interest. **[1 mark]**

[Total: 5 marks]

7. List the problems that may be encountered with overseas investments. **[5 marks]**

8. Describe briefly how you would use a dividend discount model to value an ordinary share stating the formula you would use and the assumptions that you would need to make. **[5 marks]**

9. List the ways in which costs can arise when an investment regulatory system is developed. **[6 marks]**

10. Discuss the principal economic factors which influence bond yields. **[6 marks]**

11. (i) Outline the differences between unit trusts and investment trusts. **[3 marks]**

(ii) State two differences between unit trusts and open-ended investment companies (OEICs) **[1 mark]**

[Total: 4 marks]

12. (i) List the relative advantages of valuing an investment portfolio using the notional portfolio method and using quoted market values. **[4 marks]**

(ii) List 7 methods (other than by using a notional portfolio and using market values) to value a portfolio of equities and derivatives. **[3 marks]**

[Total : 7 marks]

13. State the main characteristics of the following indices:
the FTSE 100, the FTSE 250, the FTSE 350, the FTSE Actuaries Government Securities UK indices, the Dow Jones Industrial average and the S&P 500.

[6 marks]

14. (i) Describe briefly the “money market”.

[2 marks]

(ii) List the financial instruments that are traded and the other transactions that are typically undertaken on the money market.

[2 marks]

(iii) Outline the reasons why an investment manager would purchase these investments

[3 marks]

[Total 7 marks]

15. (i) Outline the factors you would expect to influence the difference between the real yield on government index-linked securities and the gross redemption yield on conventional corporate bonds.

[4 marks]

(ii) Describe how you would expect the yield difference to change in the event of an unexpected drop in the level of economic growth in both the country and in the global economy.

[4 marks]

[Total: 8 marks]

16. (i) You intend to build a risk model for the purpose of capital project evaluation. Define risk and describe how you would incorporate risk into your model

[3 marks]

For many years the inhabitants of two islands have travelled between the islands in boats and car ferries. A major construction company is planning to build a toll bridge as a link between the two islands.

They have asked you to conduct a risk analysis of the project.

(ii) Describe the steps which you would take to identify the risks facing this project. Include three examples specific to the toll bridge in your answer.

[4 marks]

(iii) List four methods of mitigating risk in a capital project. For each of the four methods listed, include an example of a risk which is specific to the toll bridge project and which could be mitigated in this way (provide a different risk example for each of the four mitigation methods).

[4 marks]

[Total: 11 marks]

- 17.** Mrs Kohler works as an IT consultant, marketing her products around European countries. She leads a busy life and following the birth of her fifth child she does not want to be bothered with time-consuming investment decisions. However, she does not wish to blindly allow her wealth to be managed on her behalf. Nor is she willing to pay “whatever it takes” to have her portfolio managed on her behalf. At present a large part of her wealth is invested in the shares of the company she works for.

She has contracted you as a financial advisor to take over this part of her affairs and let her get on with her job and her family life.

- (i) Draw a diagram showing the five stages of the actuarial control cycle.
[3 marks]
- (ii) Explain how you would use the three key stages to enable you to analyse the client’s requirements and provide an appropriate service.
[10 marks]
- (iii) Give some examples of the information you would request in order to assess the general background and to assess the client’s economic situation.
[5 marks]

[Total: 18 marks]

END OF EXAMINATION

