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OLLSCOIL NA hÉIREANN, GAILLIMH

NATIONAL UNIVERSITY OF IRELAND, GALWAY

AUTUMN EXAMINATIONS, 2002

B. COMMERCE DEGREE (SECOND YEAR)
B. COMMERCE WITH LANGUAGE DEGREE (SECOND YEAR)
SECOND CORPORATE LAW EXAMINATION
SECOND YEAR INFORMATION TECHNOLOGY EXAMINATION
FOURTH INDUSTRIAL ENGINEERING EXAMINATION

BUSINESS FINANCE I - AY208

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Professor J. F Collins
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Time allowed: TWO AND A HALF hours

NOTE: This examination paper is divided into THREE sections as follows:

Section A contains ONE question, which is compulsory. Total marks for this section is 40 marks.

Section B contains TWO questions. Candidates are required to attempt ONE question from this section. Each question carries 30 marks. Total marks for this section is 30 marks.

Section C contains TWENTY Multiple Choice Questions, all of which should be attempted. [NEGATIVE MARKING WILL NOT APPLY]

Total Marks for this Section is 30 marks.

Instructions for Section (C) are detailed on the page preceding the multiple choice questions.

DISCOUNT TABLES ARE ATTACHED.

SEPARATE ANSWER BOOKS MUST BE USED FOR SECTION A & SECTION B [SECTION C TO BE ANSWERED ON MCQ SHEET]

SECTION A

(This question is compulsory)

➢ **Separate Answer Book to be used for this Section**

Question 1

Omni Store Ltd. is a large chain of small stores. The company is considering expanding, by locating a new store in Corofin.

The business development manager has gathered together the following information on the financial benefits and costs of the proposal. You are to analyse these and advise them on whether they should proceed with this new store or not.

(1) They have found suitable premises which can be leased for a seven year period at €17,000 payable annually in advance. Legal fees amounting to €6,000 are payable immediately. It is expected that the company will vacate the premises at the end of the lease period.

(2) The cost of the investment in refurbishment and furniture and fittings is €150,000. This cost can be written off in full immediately for tax purposes, against taxable profits generated by the many other stores. The furniture and fittings are expected to have a residual resale value of €25,000 in seven year's time.

(3) The building also requires some structural alterations expected to cost €140,000. The company will not be reimbursed for any of these costs at the end of the lease period. The company proposes writing these costs off on a straight line depreciation basis over the seven year period, assuming a zero residual value.

(4) Annual repair, maintenance and redecoration costs are estimated at €15,000 annually.

(5) A working capital investment of €60,000 will be required immediately the store is opened.

(6) Annual sales are estimated at €980,000. The expected level of variable cost is the same as that in all other stores – 75%, giving a contribution of 25%.

(7) The opening of this particular store will affect sales in the surrounding areas and result in a combined loss of sales in other Omni Store shops of €180,000 annually.

(8) Fixed operating costs of the store are expected to amount to €95,000 per annum excluding accounting depreciation.

(Cont'd..)

Question 1 Cont'd...

(9) Omni Store Ltd. pays tax at a rate of 30% on taxable profits in the same year as the liability arises. Assume the company has sufficient taxable profits elsewhere to absorb any tax benefits at the Corofin store. Capital Gains/Losses are also taxed at 30% and also payable as the liability arises.

(10) The relevant cost of capital for this project is 18%.

(11) Cash flows are assumed to arise at the end of each year except where otherwise indicated.

<u>You are required to:</u>

(a) Prepare a statement of after-tax cash flows attributable to the project for each year of its seven-year life.

(14 Marks)

(b) Estimate the <u>Net Present Value</u> and <u>Internal Rate of Return</u> for this project, and for <u>each</u> method, recommend whether the project should be accepted.

(8 Marks)

(c) Critically evaluate each method used in part (b) and comment briefly on the suitability or otherwise of each method of appraisal in this particular instance, stating reasons.

(8 Marks)

(d) Discuss the problem of Capital Rationing in general

<u>and</u>

describe how, and in what circumstances, the profitability index approach may be used by a firm faced with a capital rationing constraint. (You should differentiate between situations where projects under consideration may be divisible or otherwise).

(10 Marks)

Total : 40 Marks

Section B continues on the next page...

SECTION B

(ONE question to be attempted from this Section)

➢ **Separate Answer Book to be used for this Section**

Question 2

Owen Ventures Ltd. at the present time allows its customers 25 days credit. The company has annual sales of €1 million of which 10% are cash sales. Sales are made evenly throughout the year. Half of the company's debtors pay on time while the other half take an average of 55 days to pay. The company is considering offering a cash discount of 2% to its customers for payment made within 25 days. The company expects that 80% of the customers who presently take an average of 55 days to pay will avail of the discount, while the other 20% will continue to take the 55 days average to pay. The company anticipates that this scheme will also reduce bad debts from €8,500 to €5,600 per year. The company currently borrows from its bank at 18% per annum. (Take 360 days to the year).

You are required to:

(a) Calculate the funds released by the change in credit terms.

(b) Calculate the cost to the company of the discount offered.

(c) Calculate the net effect on the company's pre tax profit of adopting the discount scheme

and

indicate whether or not the company should proceed.

(a) + (b) + (c) (18 Marks)

(d) Outline the factors a manager should consider in endeavouring to determine an optimal credit extension policy to customers.

(12 Marks)

Total: 30 Marks

Question 3

Discuss **TWO** of the following topics in the context of Financial Management:

(i) Determining the cost of capital in a firm with long-term debt and preference shares in its capital structure.

(ii) The management of cash of marketable securities

(iii) The characteristics **and** valuation of ordinary shares

(15 Marks per topic)

Total: 30 Marks

SECTION C (QUESTION 4)

Your answers to this section must be on the special purpose MCQ (multiple choice questions) Answer Sheet which must be completed separately in accordance with the instructions given.

INSTRUCTIONS FOR COMPLETION OF MCQ SHEET

IT IS MOST IMPORTANT THAT YOU FOLLOW THESE INSTRUCTIONS. THE MCQ ANSWER SHEET FORM WILL BE READ BY MACHINE AND FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN NO MARKS BEING AWARDED FOR THIS SECTION.

- **Enter your Candidate Number in the appropriate line at the top right hand corner:**

  › | | | | | | | | | |

  URGENT: Your Candidate number for this purpose is your **8 DIGIT STUDENT NUMBER (NOT EXAMINATION NUMBER)** This number should fill the first 8 boxes and should be followed at the end by **0 (zero)** to complete the **nine digit candidate number** box e.g. if student number is 12345678 you should enter

  › | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 0 |

- **Enter immediately your**
  - name
  - examination
  - date
- Use only HB pencil **or** blue/black biro
- Indicate your choice of answer like this (Assuming your consider **[c]** to be the correct answer for question 1)

  › [a] [b] [~~c~~] [d] [e]

- If you have a change of mind **Tippex** out **neatly** and remark new choice.
- Do **not** mark in any other way, e.g. no ticks, crosses or circles

- **Candidates are strongly advised to spend at the very maximum 1 hour on this section. Each question has a value of 1½ marks and accordingly, spending an inordinate amount of time on any one question would be ill-advised.**

Multiple Choice Questions

1. The most widely accepted objective of the firm is to

   (a) minimise risk

   (b) maximise profits

   (c) maximise shareholder wealth

   (d) maximise earnings per share

2. Fast Wheels, Inc. expects to pay an annual dividend of €0.72 next year. Dividends have been growing at a compound annual rate of 6 percent and are expected to continue growing at that rate. What is the value of a share of stock of Fast Wheels to an investor who requires a 14 percent rate of return?

   (a) €9.00

   (b) €5.14

   (c) €9.54

   (d) None of the above

3. Over the past 7 years the dividends of Sunshine Mining have grown from €0.24 to the current level of €0.53. What is the approximate annual compound growth rate of Sunshine's dividends?

   (a) 20.8%

   (b) 12.0%

   (c) 9.5%

   (d) 10.0%

4. What is the current value of Bandag Inc. to an investor who has a required rate of return of 12 percent? The current dividend is €1.00 and the dividends are expected to grow 8 percent per year for 3 years. At the end of 3 years the investor expects to sell the security for €76.

   (a) €79.51

   (b) €56.90

   (c) €51.13

   (d) €76.00

5. A drill press costs €30,000 and is expected to have a 10 year life. The drill press will be depreciated on a straight-line basis over 10 years to a zero estimated salvage value. This machine is expected to reduce the firm's cash operating costs by €4,500 per year. If the firm is in the 40 percent marginal tax bracket, determine the annual net cash flows generated by the drill press.

   (a) €4,500

   (b) €900

   (c) €5,700

   (d) €3,900

Cont'd..

6. All of the following are advantages of the NPV-payback approach to risk analysis except
   (a) it is easy and inexpensive to apply
   (b) it considers a project's liquidity
   (c) it explicitly considers the variability of a project's return
   (d) it is consistent with the notion that risk increases with futurity

7. A firm with a 40 percent marginal tax rate has a capital structure of €60,000,000 in debt and €140,000,000 in equity. What is the firm's weighted cost of capital if the marginal pre-tax cost of debt is 12 percent, the firm's average pre-tax cost of debt outstanding is 8%, and the cost of equity is 14.5 percent?
   (a) 13.75%
   (b) 11.59%
   (c) 12.31%
   (d) None of the above

8. Groves, Inc. pays an annual dividend of €1.22. This dividend is expected to continue growing at a rate of about 5 percent each year. The firm is in a fairly risky business and has a beta of 1.45. The expected market rate of return is 13.5 percent, and the risk-free rate is 9.3 percent. What is the cost of equity for Groves?
   (a) 19.6%
   (b) 13.5%
   (c) 15.4%
   (d) 6.1%

9. The use of fixed-cost financing sources is referred to as the use of
   (a) operating leverage
   (b) a leveraged buyout
   (c) financial leverage
   (d) combined leverage

10. A major disadvantage of a sole proprietorship is the fact that
   (a) it is expensive to establish
   (b) the owner has unlimited personal liability
   (c) it is easy to finance growth
   (d) the owner pays taxes on all the income

Cont'd..

11. Cash flow concepts are _____ but generally accepted accounting principles are ______ in the determination of a firm's net income.

(a) unambiguous, ambiguous

(b) ambiguous, unambiguous

(c) ambiguous, also ambiguous

(d) unambiguous, straightforward

12. As the risk of an investment ______, the net present value will _______.

(a) decreases, decrease

(b) increases, increase

(c) decreases, not be affected

(d) increases, decrease

13. The fact that no investor can expect to earn excess returns based on an investment strategy using only historical stock price or return information is an example of _________ market efficiency.

(a) strong-form

(b) weak-form

(c) semiweak-form

(d) semistrong-form

14. Drexel had sales last year of €34 million (all cash). Operating expenses were €13.6 million and depreciation was €3.8 million. If Drexel's tax rate was 35 percent, what was the firm's after-tax operating cash flow (in € millions) for the year?

(a) €14.59

(b) €10.79

(c) €8.47

(d) None of the above

15. An annuity due is one in which

(a) payments or receipts occur at the end of each period

(b) payments or receipts occur at the beginning of each period

(c) payments or receipts occur forever

(d) cash flows occur continuously

Cont'd..

16. Air Atlantic (AA) has been offered a 3-year old jet airliner under a 12-year lease arrangement. The lease requires AA to make annual lease payments of €500,000 at the beginning of each of the next 12 years. Determine the present value of the lease payments if the opportunity cost of funds is 14 percent.

    (a) €2,830,000

    (b) €13,635,500

    (c) €6,000,000

    (d) €3,226,200

17. ICX Company has an issue of perpetual bonds (par value €1,000) that pays 5% annual interest. Determine the yield (to the nearest tenth of 1 percent) if the bonds are currently selling for €625.

    (a) 5.0%

    (b) 8.0%

    (c) 3.1%

    (d) 6.25%

18. All of the following are advantages of leasing except

    (a) generally lower cost than ownership

    (b) leasing smooths out expenses

    (c) leasing may increase a firm's liquidity

    (d) (a) and (b) only

19. Pronet has annual sales of €724 million from its 600 retail stores. Pronet can reduce its mail float by 2 days through the use of wire transfers. The annual cost of the wire transfers is expected to be €105,610. If Pronet's cost of short-term funds is 9.75 percent, should the change to wire transfers be made? Assume 365 days per year.

    (a) No, loss of €247,340

    (b) Yes, savings of €281,185

    (c) Yes, savings of €474,582

    (d) No, loss of €105,610

20. In the basic EOQ model, if the lead time for replenishing the inventory is constant and known with certainty, the optimal order quantity (Q*):

    (a) becomes larger

    (b) is not affected

    (c) becomes smaller

    (d) can become smaller or larger

End of Multiple Choice Questions