

**OLLSCOIL NA hÉIREANN, GAILLIMH**

**NATIONAL UNIVERSITY OF IRELAND, GALWAY**

**SEMESTER I EXAMINATIONS 1999/2000**

**HIGHER DIPLOMA IN BUSINESS STUDIES**

**FINANCIAL MANAGEMENT 1 – AY 872**

**Professor R.W. Scapens  
Professor J.F. Collins  
Ms. E. Mulligan**

**Time Allowed: 2½ Hours**

**Candidates should answer the question in Section A and two questions  
in Section B**

**Discount Tables attached.**

**SECTION A**  
**(OBLIGATORY – 40 MARKS)**

**Question 1**

Bisto Ltd is considering replacing one of its existing processing machines with a more modern and efficient machine. The details relating to the replacement idea are as follows:

1. The new machine currently sells for £650,000. Additional costs of £10,000 will be incurred for delivery and installation. The new machine has an estimated 10 year life. It will be depreciated at a rate of 50% of cost immediately, with the balance being depreciated evenly over the ten-year period. The salvage value at the end of the ten-year period is estimated to be £20,000.
2. The existing machine has been fully depreciated and has a scrap value of £15,000.
3. It is estimated that acquisition of this new machine will result in cash savings in respect of staff salaries amounting to £80,000 annually. However, redundancy costs amounting to £15,000 will be payable immediately.
4. Additional sales are anticipated as follows:

<b>Period</b>	<b>Additional Sales</b>	<b>Selling price</b>
Years 1-3	1,500 units	£40 per unit
Years 4-10	2,000 units	£45 per unit

5. Details on variable costs associated with the additional sales are as follows:

<b>Period</b>	<b>Materials/Labour</b>	<b>Variable Overheads</b>
Years 1-3	£10 per unit	£5 per unit
Years 4-10	£12 per unit	£6 per unit

6. Annual fixed costs are expected to increase by £2,000.
7. The annual cost of defects with the old machine was £5,000. This is not expected to change with the new machine.
8. Additional working capital of £20,000 will be required immediately.
9. Bisto Ltd has a cost of capital of 12% and is liable to tax at 30%.

*(Question 1 continued over.....)*

.....*Question 1 continued from previous page*)

**You are required to:**

- (a) Advise Bisto Ltd on whether they should proceed with this investment using the Net Present Value technique for evaluating capital investments.

**(26 Marks)**

- (b) Calculate the internal rate of return for this investment.

**(6 Marks)**

- (c) Discuss the advantages and disadvantages of the internal rate of return as a method for evaluating investment opportunities.

**(8 Marks)**

**Total: 40 Marks**

**SECTION B**  
**(ANSWER TWO QUESTIONS FROM THIS SECTION)**

**Question 2**

- a) Oxo Ltd currently pays a dividend of £4.00 per share. The company expects this dividend to grow at an annual rate of 8% for the next 2 years. The dividend is then expected to increase by £2 in year 3 and to grow at a constant annual rate of 4% thereafter.

As an investor with a 12% required rate of return, how much would you expect to pay for 100 shares in Oxo Ltd?

**(12 Marks)**

- b) Oxo Ltd issued an 8.5% coupon, £1,000 par value bond that matures on August 15 in the year 2010. On August 15, 1991 the bond was priced at £1,078.

**You are required to:**

- (i) Compute the yield to maturity as of August 15, 1991 assuming that interest is paid and compounded annually.

**(8 Marks)**

- (ii) Briefly explain why a fixed income bond may be traded at a price below its par value.

**(4 Marks)**

- c) Oxo Ltd has outstanding a preferred stock with a par value of £50 that pays an annual dividend of £2.75. The stock matures in 15 years time. At that point in time, the company will redeem the stock at its par value. If you require an 8% return on this investment how much would you be willing to pay for this stock today?

**(6 Marks)**

**Total: 30 Marks**

### **Question 3**

Paxo Ltd generates £30 million in credit sales on the basis of its “net 20” credit policy. The firm, in its efforts to expand its market share, is considering changing its credit policy to “net 40”. Paxo Ltd forecasts that the doubling of the credit period will result in a £5 million increase in credit sales. The firm expects the longer credit period to increase the firm’s average collection period from 32 days to 47 days. The firm also expects the new policy to result in a one percentage point increase in bad debt losses from the current 3% level. The firm’s cost of capital for working capital requirements is 14% and its variable cost ratio is 85%. The firm feels that its present inventory levels are adequate to support the expected sales increase.

**You are required to:**

- (a) Advise Paxo Ltd on whether it should lengthen its credit period to 40 days?  
**(18 Marks)**
- (b) State whether your advice would change if the firm is able to achieve all of the benefits outlined above with a “net 30” policy? Assume that the “net 30” policy would result in a 38 day average collection period, and a one percentage point increase in bad debt losses from the current 3% level as outlined above.  
**(4 Marks)**
- (c) Discuss how a company could evaluate individual credit applicants.  
**(8 Marks)**

**Total: 30 Marks**

### **Question 4**

Discuss **two** of the following topics in the context of financial management:

- a) The advantages and disadvantages of raising finance using debt **and** the advantages and disadvantages of raising finance using equity capital, both from the perspective of the company seeking to raise the finance.
- b) Agency relationships and agency problems.
- c) The cash management function.

**(15 marks each topic)**

**Total: 30 Marks**