

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
Cambridge International Diploma in Business  
Advanced Level

**BUSINESS FINANCE**

**5173/01**

Core Module

October 2004

**2 hours 15 minutes**

Additional Materials: Answer Booklet/Paper

**READ THESE INSTRUCTIONS FIRST**

The time allocated for this examination includes 15 minutes reading time.  
Write your Centre number, candidate number and name on all the work you hand in.  
Write in dark blue or black pen on both sides of the paper.  
You may use a soft pencil for any diagrams, graphs, music or rough working.  
Do not use staples, paper clips, highlighters, glue or correction fluid.

Attempt **all** tasks.

Start each task on a new piece of paper.

Please leave a margin on the right and left hand side of each new page.

At the end of the examination, fasten all your work securely together, in the correct order.

The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **5** printed pages and **3** blank pages.



**You must read the case study below and attempt all of the tasks that follow.**

[The case study is fictitious.]

### **New Moon Ltd**

Dr Riaz Moon has been in business for over 20 years. He inherited the family retail business but was not happy and eventually sold the business to his brother. Although the assets of the business were not worth much, he did receive sufficient funds from the payment for goodwill to be able to set up a small engineering firm, New Moon Ltd. Dr Moon was an engineering graduate and after only two years he had successfully developed a solar powered fuel pump for which he obtained a patent. 5

The sales of the fuel pump grew rapidly and Dr Moon had to choose between extending his manufacturing section or sub-contracting the manufacturing through a licensing agreement. He chose to sub-contract and has since used the profits to expand the research and development department of the firm. The firm now undertakes research for other firms in addition to developing new products. Recently Dr Moon also sponsored some development work at the local university, as his research section was becoming overstretched. 10

After eight years of operation, and despite subsequent injections of capital from a number of venture capitalists, it is clear that New Moon Ltd requires much more capital if it is to continue to survive. The firm's accountant has suggested that Dr Moon should consider 'going public' but Riaz is unsure about this proposal. He knows very little about accounting procedures. He once confused the trial balance with the balance sheet. However, he does appreciate the need for accuracy in the records. He is keen to fulfil his duties as a director of the firm. 15

Despite this lack of capital the future of the firm looks assured although there are a number of external factors that need to be addressed by the management of the firm. 20

- The National Government is considering introducing legislation that could affect the ability of businesses to sub-contract work to overseas companies.
- It is widely forecast that there is likely to be a downturn in the world economy.
- Indications point towards a decline in the birth rate in many less developed areas of the world, and it is noticeable that many of the developed nations are becoming more environmentally conscious. 25
- Advances in technology are rapidly reducing manufacturing costs and there appears to be more demand for newer and environmentally friendly products.

New Moon Ltd already has several new projects in the planning stage and Dr Moon anticipates that several more will emerge in the near future. 30

**Financial Information****Item 1****Project A**

Outright purchase of equipment \$300,000		
\$		
Expected Returns	Years 1-3	120,000 each year
	Year 4	150,000
	Year 5	90,000
Running Costs	Years 1-4	15,000 each year
	Year 5	20,000
Expected useful life	5 Years	
Residual Value	\$10,000	

**Project B**

Outright purchase of equipment \$400,000		
\$		
Expected Returns	Years 1-5	75,000 each year
	Years 6-7	130,000 each year
	Year 8	120,000
Running Costs	Years 1-5	10,000 each year
	Years 6-7	15,000 each year
	Year 8	12,000
Expected useful life	8 years	
Residual value	\$25,000	

**Project C**

Outright purchase of equipment - \$750,000		
\$		
Expected Returns	Years 1-6	100,000 each year
	Years 7-10	150,000 each year
	Years 11-12	130,000 each year
Running Costs	Years 1-12	15,000 each year
Expected useful life	12 years	
Residual value	\$45,000	

**Item 2**

## Standard Cost Information

## Material Costs

To manufacture 1 unit of output it is estimated that it takes 10 kilograms of materials at a cost of \$10 per kilogram.

In the last production time period the firm produced 1000 units of output, using 11,700 kilograms of materials at a cost of \$98,000

## Labour Costs

To manufacture 1 unit of output it is estimated that it takes 2 hours of labour input at a cost of \$5 per hour

During the last production period, 1000 units of output were produced using 2,300 hours of labour input at a cost of \$8,900

**You must attempt ALL of the following tasks**

- 1 (a) Explain what is meant by the term goodwill. [2]  
 (b) Explain the likely financial consequences of obtaining a patent. [2]  
 (c) Identify and explain **one** advantage and **one** disadvantage of 'sub-contracting' the manufacturing through a licensing agreement. [4]  
 (d) Explain how sponsorship could be financially advantageous to New Moon Ltd. [2]  
 (e) Explain what is meant by the term venture capitalists. [2]  
**[Total: 12]**
- 2 Explain how **each** of the external (PEST) factors outlined in the case study could affect the future profitability of the firm. [3 x 4 = 12]  
**[Total: 12]**
- 3 Use the information provided in **Item 1**.
- (a) Calculate the percentage accounting rate of return (ARR) for projects A and B. [5 x 2 = 10]  
 (b) Calculate the payback period for projects A and B. [3 x 2 = 6]  
 (c) Explain why a firm such as New Moon Ltd should consider introducing investment appraisal methods that take account of the 'time value of money'. [4]  
**[Total: 20]**
- 4 (a) Distinguish clearly between a trial balance and a balance sheet. [4]  
 (b) Outline and explain the basic balance sheet equation. [3]  
 (c) An audited set of accounts will represent a true and fair view of the financial affairs of a business.  
 Identify and explain **two** possible adjustments that may be necessary to ensure that the accounts are accurate. [3 x 2 = 6]  
**[Total: 13]**
- 5 Use the information contained in **Item 1** and employ the straight line method of depreciation.
- (a) Calculate the annual depreciation allowance for **each** of the projects (A, B and C). [3 x 3 = 9]  
 (b) Calculate the book value for **each** of the project machines at the end of year 3. [1 x 3 = 3]  
 (c) State with reasons which of the projects you would recommend should be undertaken. [3]  
**[Total: 15]**

- 6 (a) Identify and explain **two** duties of the directors of a private limited company. [2 x 2 = 4]
- (b) Identify and explain **one** advantage and **one** disadvantage of converting from a private limited company to a public limited company. [2 x 2 = 4]
- (c) Identify and explain **two** methods that could be employed to 'go public'. [2 x 2 = 4]  
[Total: 12]

7 Use the information contained in **Item 2**.

(a) Calculate:

- (i) the direct material price variance [3]
- (ii) the direct material usage variance [3]
- (iii) the direct material total variance [2]

(b) Calculate:

- (i) the direct labour rate variance [3]
- (ii) the direct labour efficiency variance [3]
- (iii) the direct labour total variance [2]  
[Total: 16]

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