



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

BUSINESS FINANCE

5173/01

Optional Module

October 2007

2 hours plus 15 minutes reading time

Additional Materials: Answer Booklet/Paper



READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs 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 **6** printed pages and **2** blank pages.



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

(The following case study is fictitious.)

NEW MOON LTD

Dr Riaz Moon has been in business for over thirty years and is widely regarded as a very successful entrepreneur. He has actively run New Moon Ltd for the last six years and the company has a good reputation for producing good quality, up-to-date engineering products. The recent sales figures have been particularly encouraging and Dr Moon is looking to expand his operations by opening another factory, possibly overseas. 5

New Moon Ltd was originally established to produce a solar powered fuel pump, which had been invented by Dr Moon and for which he had obtained a patent. The pump was a great success and sales grew rapidly. Most of the manufacturing of the pump was sub-contracted to overseas companies under a licensing agreement. This has allowed Dr Moon to concentrate on research and development and he has developed a number of new products, which he is distributing through a network of agents. The patent for the fuel pump is due for renewal but Dr Moon has decided that the company should sell the patent and he has been approached by a number of interested parties. 10

Recently Dr Moon has accepted a research project on behalf of the State Environmental Department. The company is to receive a grant and will receive royalty payments when the research is complete. In order to speed up the research Dr Moon has sponsored a number of undergraduates from the local university. 15

After six years of operation and despite regular injections of capital from a number of venture capitalists, it is clear that New Moon Ltd requires more capital if it is to continue to prosper. The firm's accountant has suggested that Dr Moon should consider 'going public' but Riaz is unsure about the proposal. He understands very little about formal accounting procedures, indeed he once confused the trial balance with the balance sheet. He does, however, appreciate the need for accuracy in the financial records and he has always been keen to fulfil his duties as a director of the company. 20

Despite this lack of capital the future of the company looks assured, although there are a number of external factors that need to be addressed by the management. The external factors are: 25

- The National Government is considering introducing legislation restricting the ability of businesses to sub-contract work to overseas companies.
- A downturn in the world economy has been forecast within the next three years.
- Indications point towards a decline in the birth rate in many developing areas of the world and it is noticeable that many of the developed nations are becoming more environmentally conscious. 30
- Advances in technology are rapidly reducing manufacturing costs but are also making products go out of date more quickly.

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.

Financial Information

Item 1

The company employs the straight-line method of depreciation.

Project A

		\$ ¹
Outright purchase of equipment		300 000
Expected returns	Years 1 – 3	120 000 per year
	Year 4	150 000
	Year 5	90 000
Running costs	Years 1 – 4	15 000 per year
	Year 5	20 000
Expected useful life	5 years	
Annual depreciation allowance		50 000

Project B

		\$
Outright purchase of equipment		400 000
Expected returns	Years 1 – 5	75 000 per year
	Years 6 – 7	130 000 per year
	Year 8	120 000
Running costs	Years 1 – 5	10 000 per year
	Years 6 – 7	15 000 per year
	Year 8	12 000
Expected useful life	8 years	
Annual depreciation allowance		40 000

Project C

		\$
Outright purchase of equipment		750 000
Expected returns	Years 1 – 6	100 000 per year
	Years 7 – 10	150 000 per year
	Years 11 – 12	130 000 per year
Running costs	Years 1 – 12	15 000 per year
Expected useful life	12 years	
Annual depreciation allowance		60 000

¹ Amounts in US dollars.

Item 2**Standard Cost Information****Material Costs**

To manufacture 1 unit of output it is estimated that it would take 10 kilograms of materials at a cost of \$12 per kilogram.

In the last production time period the firm produced 1000 units of output, using 11 500 kilograms of materials at a cost of \$131 000.

Labour Costs

To manufacture 1 unit of output it is estimated that it would take 2.5 hours of labour input at a cost of \$8 per hour.

During the last production period, 1000 units of output were produced using 2100 hours of labour input at a cost of \$9500.

You must attempt ALL of the following tasks.

- 1 (a) Identify and explain **two** financial reasons why Dr Moon might consider opening a new factory overseas. [4]
- (b) Explain why a company might be interested in purchasing the patent for the fuel pump. [2]
- (c) List and explain **one** advantage and **one** disadvantage of 'sub-contracting the manufacturing through a licensing agreement'. [4]
- (d) Explain how sponsorship of undergraduates from the local university could be financially advantageous to New Moon Ltd. [2]
- (e) (i) Explain what is meant by the term 'venture capitalists'. [2]
- (ii) Explain why a venture capitalist would be particularly interested in investing in a company such as New Moon Ltd. [3]
- [Total: 17]**
- 2 Explain how **each** of the external (PEST) factors outlined in the case study could affect the future profitability of the firm. [4 x 3]
- [Total: 12]**
- 3 Use the information provided in **Item 1**.
- (a) Calculate the likely average annual profit for projects **A** and **B**. [2 x 5]
- (b) Calculate the payback period for projects **A** and **B**. [2 x 3]
- [Total: 16]**
- 4 (a) Distinguish clearly between a trial balance and a balance sheet. [4]
- (b) Outline and explain the basic balance sheet equation. [2]
- (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. [2 x 3]
- [Total: 12]**
- 5 **Item 1** has information on the three projects, **A**, **B** and **C**. Use the information provided and the straight-line method of depreciation to calculate:
- (a) the estimated residual value for **each** of the projects **A**, **B** and **C**; [3 x 3]
- (b) the book value for **each** of the project machines at the end of **year 3**. [3 x 2]
- [Total: 15]**

- 6 (a) List and explain **two** duties of the directors of a private limited company. [2 x 2]
- (b) Identify and explain **one** advantage and **one** disadvantage of converting from a private limited company to a public limited company. [2 x 2]
- (c) Identify and explain **two** methods that could be used to 'go public'. [2 x 2]
[Total: 12]
- 7 Use the information contained in **Item 2** to calculate the following:
- (a) (i) direct material price variance [3]
(ii) direct material usage variance [3]
(iii) direct material total variance [2]
- (b) (i) direct labour rate variance [3]
(ii) direct labour efficiency variance [3]
(iii) direct labour total variance [2]
[Total: 16]

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