Cambridge International AS & A Level

Cambridge International Examinations
Cambridge International Advanced Subsidiary and Advanced Level

BUSINESS **9609/33**

Paper 3 Case Study **October/November 2017**

3 hours

No Additional Materials are required.

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READ THESE INSTRUCTIONS FIRST

An answer booklet is provided inside this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer paper ask the invigilator for a continuation booklet.

Section A
Answer **all** questions.
Section B
Answer **one** question.
You are advised to spend no more than 40 minutes on Section B.
The businesses described in this question paper are entirely fictitious.

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

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CAMBRIDGE International Examinations

Nelson Food Processing (NFP)

NFP is a public limited company. The business was started by farmer Tom Nelson who owned a farm in a beautiful region of country X. It was a dairy farm with a large herd of cows. His three sons expanded the business by buying more land and opening a butter and cheese processing factory which used only milk from the Nelson herd. The family sold a majority of its shares in NFP when it converted to public limited company status four years ago. Tom retired many years ago and his three sons no longer have management roles in NFP. Ron Nelson – Tom's eldest son – was replaced last year as Chief Executive Officer by Sian Wilkins.

Sian's vision for NFP is to make it one of the largest food processing companies in the country using the quality brand image built up over the years by the Nelson family. Since her appointment NFP has started to make a large range of desserts, all of which have milk as one of their ingredients.

Last year the factory was extended and equipped with automated machinery for the production of meat products such as pies and burgers. This machinery required some workers skilled in Information Technology (IT) to be recruited. Several of these have left the business already as there are skill shortages in the region where NFP is located. All NFP products are sold to supermarkets in country X.

Close the farm and buy in fresh milk?
The original dairy farm is now only a small part of the NFP business. The dairy farm employs just 20 workers out of a total NFP workforce of 256. The milk produced by the farm is still used in the dairy and food processing departments. The milk is of a very high quality – a feature once used by NFP as part of its brand advertising. However, Sian is now focused on making NFP more profitable as quickly as possible to satisfy shareholders. She wants to close the dairy farm and buy in milk from other suppliers at the current wholesale price of 20 cents per litre. 'Selling the herd of cows and buying in milk will increase overall profit; if we gain planning permission then we could sell the farm land for industrial development' she told the other directors recently. The latest financial and operations data for the farm are shown in Table 1.

Table 1: Financial and operations data for the NFP dairy farm

Number of litres of milk produced per week	150 000
Dairy farm labour costs per week	$9000
Cattle (cow) feed and other variable costs per litre of milk	8 cents
Proportion of NFP's annual fixed overheads allocated to the dairy farm	5%
NFP's total annual fixed overheads	$15.6m

Market development – possible expansion into country Y

The Marketing Director has obtained a report about the key features of the economy and market for food products in country Y compared with those of country X. The report is summarised in Table 2.

Table 2: Summary of report

	Country X	Country Y
Gross Domestic Product (GDP) per head	$19 000	$12 000
Average annual economic growth in last 5 years	3.0%	6.8%
Average age of population (years)	46	24
Number of main ethnic groups in the country	3	8
Proportion of all food products that are bought fresh and unprocessed	23%	56%
Number of large food processing businesses	12	3

'This report indicates that the potential risks and rewards from this possible market development are considerable. A major question is whether we recruit extra employees to sell directly to shops in country Y or use a local agent' the Marketing Director told NFP's senior management.

Takeover of Value Foods (VF)

NFP has recently taken over VF. This company is one of the longest established food processing businesses in country X. It is best known for making food products that offer value for money rather than using the best ingredients. VF sells its own brand products to one supermarket chain which focuses on low prices. The rest of VF's output is branded with other supermarkets' own labels and logos. This takeover gives NFP a large factory that increases the total capacity of the company by 50% at a lower cost than building a new facility. NFP plans to use this factory to produce new product ranges once it has been updated and new equipment installed to replace very old machines.

VF's employees learned informally of the potential takeover through rumours on social media. Sian decided that the official announcement should only be made after the takeover had been completed. At a press conference Sian told reporters: 'There are likely to be significant job losses amongst unskilled workers and some re-deployment within other more skilled roles. We did not want industrial relations problems before the takeover was announced.'

Sian was asked by a reporter about VF's recent decision not to recall thousands of products which contained meat from animals other than those animals stated on the packaging. Her response was: 'NFP's strategy will be to integrate the VF business into NFP as rapidly as possible to achieve our aim of higher profits. This means quickly changing the way VF is managed and the values and standards used in the production and marketing of its products.'

New project: expansion into frozen foods

NFP's Board of Directors plans to widen its range of products to allow NFP to develop into a more diversified processed food supplier. The Marketing Director has reported that supermarket buyers often ask NFP for a wider range of products, such as frozen food, so that they can reduce the total number of suppliers they deal with. The Marketing Director has undertaken a study of the market for frozen food. He reported to a recent Board meeting: 'There appears to be a gap in the market for frozen food products with a quality image, selling at premium prices. Frozen food seems to be associated with low quality ingredients. We could use NFP's established brand image to sell a range of high priced frozen foods, using ingredients better than those of existing producers.' The Marketing Director has already asked a project team to calculate some essential figures and these are shown in Table 3.

Table 3: Data for the frozen food project

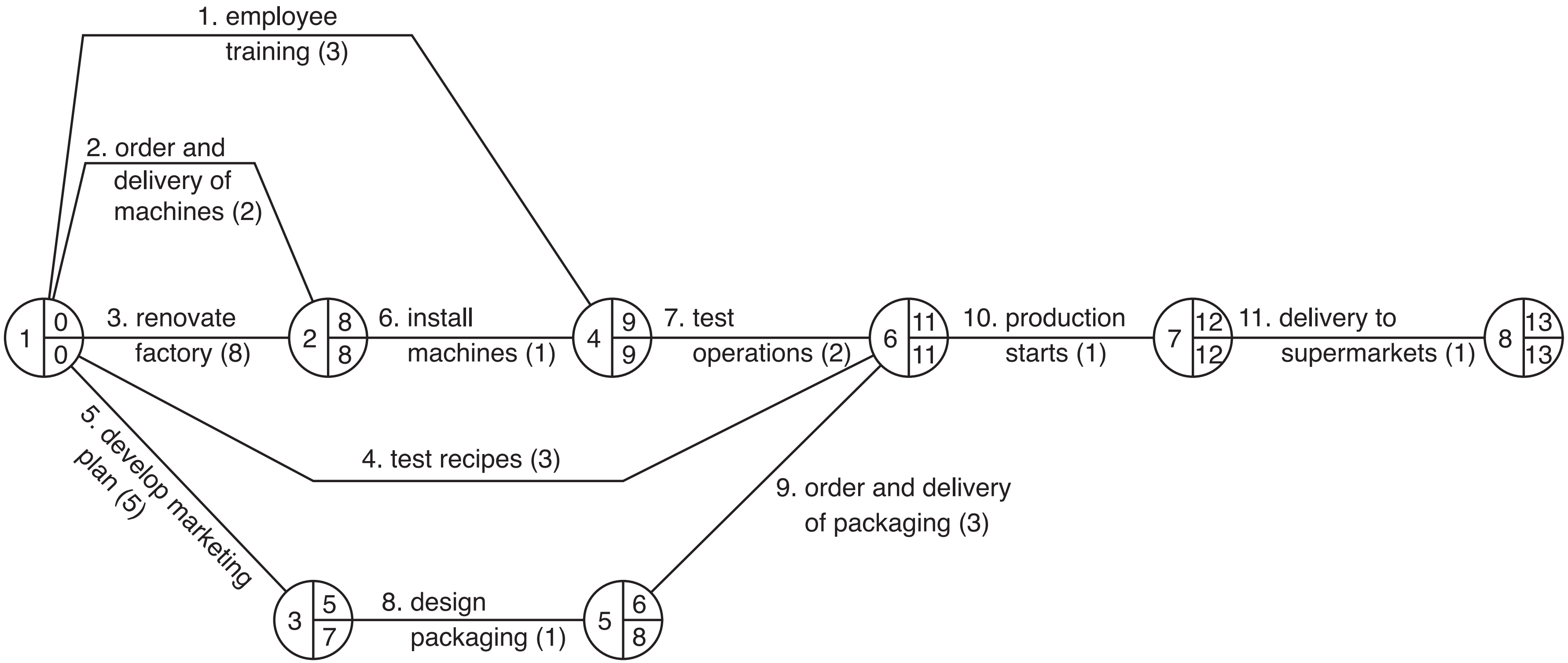
Capital cost of equipment	\$12m
Forecast annual net cash flows (first 6 years)	\$4m for years 1–3 \$5m for years 4–6
Current Central Bank interest rate in country X	10%
Accounting rate of return (ARR)	20.8%
Minimum ARR acceptable to NFP	17%

If this product development strategy is agreed by the Board at its meeting next week, the Operations Director believes that critical path analysis will help plan the project. He has drawn a simple network diagram to show the other directors – see Appendix 2. He believes this demonstrates that the first frozen food products could be produced in the re-equipped former VF factory and delivered to supermarkets within 4 months. This would allow the products to be promoted at country X's annual Food Fair which is attended by buyers from all of the supermarket groups.

Appendix 1: 10% discount factors – value of \$1 in future time periods

Year	1	2	3	4	5	6
Discount factor	0.91	0.83	0.75	0.68	0.62	0.56

Appendix 2: Network diagram for the frozen food project



(time in weeks)

Section A

Answer **all** questions in this section.

1 Analyse the benefits to NFP of using critical path analysis when planning the frozen food project. Refer to Appendix 2 in your answer. [10]

2 **(a)** Refer to Table 1 and other information provided. Calculate the likely change in NFP's annual profit if the dairy farm is closed. [6]

(b) Discuss whether NFP should close the dairy farm, using your answer from **2(a)** and other information provided. [12]

3 Evaluate the potential risks and rewards to NFP of market development into country Y. [16]

4 **(a)** Refer to Table 3 and Appendix 1. Calculate for the first 6 years of the frozen food project:

(i) discounted net cash flows [2]

(ii) discounted payback period [3]

(iii) net present value. [3]

(b) Discuss whether your results from **4(a)** and the other information provided are sufficient to enable NFP's directors to decide whether to proceed with the frozen food project. [12]

5 Evaluate the extent to which the future success of NFP's operations depends on effective workforce planning. [16]

Section B

Answer **one** question from this section.

6 Evaluate **two** strategic analysis techniques that NFP should use when considering future strategic options. [20]

7 Discuss how NFP's senior management could effectively implement its strategy of integrating the VF business into NFP. [20]

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