

**ADVANCED GCE UNIT
BUSINESS STUDIES**

Further Operations Management

FRIDAY 26 JANUARY 2007

2877

Morning

Time: 1 hour 30 minutes

Additional materials: Answer Booklet (8 pages)



INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the spaces provided on the answer booklet.
- Answer **all** questions.
- If you need extra sheets of paper, fasten these sheets securely to the answer booklet.
- Read each question carefully and make sure you know what you have to do before starting your answer.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is 60.
- You will be awarded marks for the quality of written communication where an answer requires a piece of extended writing.

This document consists of **4** printed pages.

THE NOVELTY CLOCK COMPANY LTD (NCC)

NCC was set up in 1985. Its founder, Jack Lewis, had just returned from Japan where in a meeting with a friend, he saw a baseball alarm clock. He thought the idea of novelty clocks had potential for the UK market. In the beginning he ran his business from the basement of his father's house in Derbyshire. Borrowing money from relatives and the bank, together with £5000 of his own savings, he began by importing 1000 baseball and other novelty clocks through a Japanese importing agency based in the UK. He sold them to market traders in Derby and other local towns. They were a great success. After 12 months importing, he began to make enquiries with companies in the UK that manufactured clock parts. He discovered that it was quite cheap to buy clock kits, so he ordered 500 on various sporting themes, such as football and cricket and assembled them himself. These were also a great success with the market traders and made Jack considerably more profit per unit sold. He contacted a number of mail order companies, sending them samples. They also saw the potential of the product and began placing orders with him. 5 10

Demand grew so rapidly that Jack decided to expand the business in two ways. 15

1. He took on a lease for a business unit on a nearby industrial estate.
2. He began to acquire copyright licences to produce clocks based on TV and film characters.

By the mid 1990s he was employing over 50 people, and producing a range of 50 novelty clocks. He decided to expand the business still further and sell watches, radios and moneyboxes designed by NCC. They would be made by one of its current component suppliers in China, with a good record for prompt delivery and meeting NCC's quality standards. 20

Clocks are a simple product to assemble. The three main components are movements, dials and hands. Jack bought most components from various manufacturers in the Midlands, although some were imported from the Far East. Jack now had his own small team of three designers whose job it was to come up with ideas for new products, which then needed the approval of the merchandising departments of the various TV and film companies. As well as selling products through many well-known high street retailers, NCC's sales were also growing healthily in Europe and the USA, where the TV programmes and films were being shown. By 2000 nearly 50% of the firm's sales were overseas. 25

The clock assembly areas were the responsibility of Factory Manager, Giri Patel. Jack had divided the factory into three assembly areas. His visit to Japan had clearly influenced his views on working practices so each assembly area worked as a team, with employees trained to do all jobs within that team. Quality control circles from each team met fortnightly to discuss production problems. Giri also regularly carried out work-study investigations to assess how efficiency could be improved. Following a recent investigation the factory layout was changed resulting in a 5% improvement in productivity. 30 35

In 2005 the firm was hit by two crises. Firstly, the value of the pound rose significantly against the dollar and the euro and, as a result, overseas sales fell dramatically. Secondly, the company bought two expensive licences to merchandise products for a film and TV programme, both of which failed to produce many sales, costing the company £¼ million. Jack needed to take significant steps to ensure the survival of NCC or he might have to sell the business. Giri had recently returned from visiting the Far East and he presented Jack with some interesting figures. He had asked the Chinese manufacturing company, Shining Star, to quote him production costs for "The Disco" alarm clock, one of the most popular NCC currently assemble at the Derbyshire factory. The figures are shown in the table opposite. 40 45

Table 1 Shining Star's costs of producing the Disco alarm clock

Possible orders per month	Indirect overheads (£)	Direct costs per unit (£)
2000	3800	2.40
3000	5700	2.20
4000	7800	2.10

In the light of the various changing external factors, Jack had to make some important decisions regarding the future of NCC. Should he:

- stop clock assembly at the Derbyshire factory, making 60 workers redundant, and subcontract production to China? The space this would free up could be used for warehousing the imported goods. 50
- refocus UK operations on design and development, recruiting additional designers? He was keen to diversify the business and their brief would be to work on new ranges of products and household gadgets.
- expand his sales team?

NCC's product portfolio would be likely to rise to over 100 with the type of products sold changing frequently. However, this would mean carrying much larger quantities of finished goods and sub-contracting production to a wide range of small businesses in the Far East, mainly China. 55

Answer **all** questions.

- 1 (a) Analyse **two** operational problems of team working in a business such as NCC. [6]
- (b) **Refer to Table 1.** Currently NCC makes 3000 Disco alarm clocks per month at a cost of £5.10 per unit.
Calculate the **annual** cost saving to NCC of sub-contracting production of the clocks to Shining Star. [4]
- (c) Evaluate the implications for NCC of "sub-contracting production to a wide range of small businesses in the Far East, mainly China" (lines 57–58). [16]
- 2 (a) Analyse the implications to NCC of carrying out regular work-study investigations (line 34). [6]
- (b) Discuss the operational advantages and disadvantages to NCC of having its own design team to develop new product ranges. [10]
- (c) Evaluate the implications for NCC of having to hold large quantities of stock. [16]

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