

OXFORD CAMBRIDGE AND RSA EXAMINATIONS

Advanced GCE

BUSINESS STUDIES

2877

Further Operations Management

Thursday **22 JUNE 2006** Afternoon 1 hour 30 minutes

Additional materials:
8-page Answer Booklet

Candidates may use calculators in this examination.

TIME 1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the spaces provided on the answer booklet.
- Answer **all** questions.
- Write your answers on the separate answer booklet provided.
- 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 question paper consists of 3 printed pages and 1 blank page.

WORSTON HAT CO. LTD (WHC)

Worston Hat Company (WHC) has been manufacturing hats and caps for over a century at its factory in Manchester. At first WHC produced men's hats using animal skins such as rabbit. However, production changed as cloths such as tweed became much more popular.

Sales of men's hats have been in decline for many years. In contrast, sales of ladies' hats have steadily risen. Being a specialist in men's hats, WHC made losses throughout the 1990s until William Philips joined the company as Managing Director in 1999. In 2000, WHC acquired a company in Luton that produced high quality ladies' hats, and another small manufacturer of men's hats in Leeds. Over the past five years the company's sales revenue has doubled to over £4 million.

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Factory Location	Product	Number of employees	% Profit margin on hats made
Manchester	Men's Hats	60	40
Luton	Ladies' Hats	20	55
Leeds	Men's Hats	21	30

Fig. 1 Selected data on each of WHC's factories, May 2005–April 2005.

Acquiring the two other businesses has caused some problems for WHC. Co-ordinating men's hat production between Manchester and Leeds is complex; for example, all stocks of materials are delivered to Manchester and then redistributed to Leeds. The Production Director also has to divide his time between the three production sites.

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WHC has two designers, one for men's hats based in Manchester, and one for ladies' hats based in Luton. However, WHC also works closely with its customers on new designs and their costings. All orders are taken at the sales department in Manchester where the company also operates a showroom in the city centre. Buyers from chain stores and agents who represent small independent mens and ladies outfitters come to look at WHC's latest product ranges. Many large companies and organisations, varying from airlines to local councils (who buy hats for Crossing Patrol Officers), also order headwear for their employees from WHC.

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WHC produces approximately 5000 hats per week in its UK factories. Hat making is a complex task involving many specialist skills. Hats are made using a system of cell production, although each cell is supervised. Patterns are cut out, machinists then sew together the various sections including the bands and lining materials. Production has to be flexible because some jobs are much more complex than others. Automating the production process would be very difficult, so none of the equipment at WHC is computerised. Computers are only used for stock control and accounts. Whilst there is a very wide range of men's sizes and patterns, ladies' hats are all made in one size – although the finished product can be very intricate. Demand is also seasonal with the peak for ladies' hats being spring and summer, while for men's it is in winter. WHC prides itself on producing hats of the very highest quality. Each factory employs quality checkers to confirm the standard of the finished products; for example, four are employed at the Manchester factory.

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WHC buys its cloth and other materials from all over the UK. Specialist materials come from Italy, Ecuador in South America, and the Philippines. WHC outsources a significant proportion of its production. Nearly a third of the output of WHC, by value, is produced in China. Overall this saves very little money because WHC prefers to use the same materials as it does in the UK. Lower labour costs are balanced by high shipping costs of materials for this outsourced production.

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One reason why overseas production is likely to increase is the problem of recruiting skilled machinists in the UK. Working a sewing machine is not an attractive prospect for young workers today despite the pride Britain's hat cutters, machinists and trimmers take in their trade. Many of the workers at WHC's factories have either been with the company for many years and have been trained on the job, or have been recruited as other local hat companies have closed down. William Philips believes that all hat manufacturing operations may eventually have to be moved abroad. 40

Answer **all** questions.

- 1 (a) Study the table below, which shows production data at the Leeds factory.

	Number of employees (average per year)	Output of hats
May 2004 – April 2005	24	66 000
May 2005 – April 2006	21	52 500

Calculate the percentage fall in labour productivity at the Leeds factory. [4]

- (b) Discuss how WHC might use work study to raise productivity levels at its UK factories. [10]

- (c) Evaluate whether cell production is beneficial to WHC. [16]

- 2 (a) Analyse how value analysis might benefit customers of WHC. [6]

- (b) Analyse the operational implications to WHC of having seasonal demand for ladies' and men's hats. [6]

- (c) Evaluate the implications to WHC of moving all hat manufacturing operations abroad (line 42). [16]

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