

Context – B & R Engineering Ltd

James Broadfield founded Broadfield Engineering, just outside Birmingham, in 1946. In 1962, Paul Rose joined the flourishing business as a partner and it was renamed B & R Engineering. It is near to its main customers, the Midland car industry and its raw material suppliers, the steel industry, making this an ideal location.

In 1984, Paul's son, Andrew, joined the business straight from school at 16. Today, following the retirement of both James and Paul, Andrew is the Managing Director and sole shareholder of B & R Engineering Ltd at its new bigger factory also just outside Birmingham.

B & R Engineering Ltd specialises in the manufacture of machine press tools and prototype parts. Its main customers are component companies that produce components, such as gear boxes, clutches and brake assemblies, for the motor car industry nationally and internationally (see chart).

B & R Engineering Ltd employs a Works Manager, Accountant, 5 machine tool makers, 3 CNC operators, 1 workshop technician and 1 part-time office clerk.

Specialist machine press tool making is in a highly competitive worldwide market. In recent years, many British companies have looked to the Far East, China and Korea, to purchase their machine press tools but some companies are returning to manufacturers in the UK.

B & R Engineering Ltd has invested heavily in CAD/CAM using American software which has been specially developed for its needs. It believes in and operates TQM.

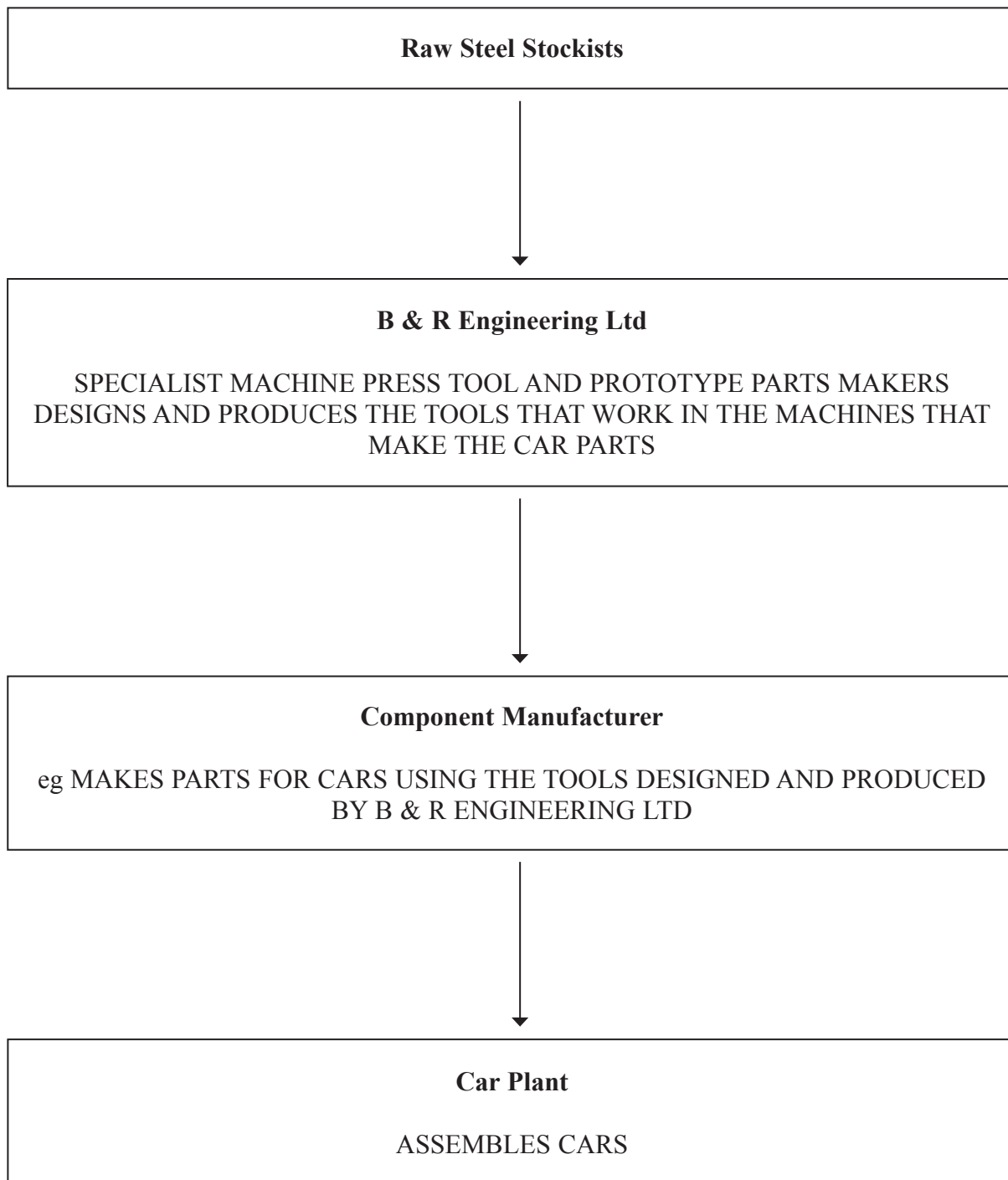
Its mission statement is – ‘to become a market leader by continuous investment in the most advanced technology in the world.’ It has a 20-year plan to achieve this aim through the objectives of increasing profits and growth of its market share.

Andrew Rose says: “We have very high staff retention and while this is partly due to the good salaries paid, a lot of this is down to our approach to the business. We believe that our staff share our values and are proud of the quality of their work. This is very important because without their support we would not be as successful as we are. We are one of the quiet little businesses just getting on with things. Our success is based on successfully marrying new technology with a happy workforce”.

B & R Engineering Ltd tries to attract well qualified machine tool makers. It offers apprenticeships and sponsorship as well as attending graduate job fairs.



The following chart shows where the business fits into the chain of production for the car manufacturing industry.



Answer ALL questions.

1. Extract from the Profit & Loss Account of B & R Engineering Ltd for the year ended 31 March 2008.

	£
Sales revenue	900 000
Cost of sales	400 000
Gross profit	?
Expenses	380 000
Net profit	?

$$\frac{\text{Gross profit}}{\text{Sales revenue}} \times 100$$

$$\frac{\text{Net profit}}{\text{Sales revenue}} \times 100$$

- (a) (i) Using the above Profit & Loss Account, calculate the gross profit and net profit for B & R Engineering Ltd.

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(2)

- (ii) Using the above Profit & Loss Account, calculate the gross profit ratio and net profit ratio for B & R Engineering Ltd.

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(2)



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(iii) Analyse whether an increase in the sales of car components would lead to an increase in B & R Engineering Ltd's market share.

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(4)

(Total 20 marks)

Q3

4. The machine tool makers at B & R Engineering Ltd use job production.

(a) (i) What type of production might each of the following use?

the component manufacturers
the car plants

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(2)



