2.6 Quality Management: Total Quality Management and Cost of Quality: Test Pack

AQA 7132 · Calculators not allowed · about 15 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions in the spaces provided. Show working for any calculation. Write full sentences for questions worth 3 marks or more.

1 Define 'total quality management' (TQM) as an organisation-wide approach to quality in a business.

(Total for Question 1 is 1 mark)

2 State two examples of prevention costs from the cost of quality framework in a manufacturing business.

(Total for Question 2 is 2 marks)

3 Which one of the following is most likely to be a consequence of successfully implementing TQM in a consumer goods factory?

- ☐ A) Permanent increase in the number of customer complaints
- ☐ B) A one-off inspection of finished goods
- ☐ C) Continuous improvements led by employees across the business
- ☐ D) Immediate elimination of all production costs

(Total for Question 3 is 1 mark)

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4 Explain one way implementing employee-led quality circles could improve product quality in a small manufacturing business.

(Total for Question 4 is 3 marks)

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5 BrightBrew expects a quality circle initiative to cut internal faults by 25% and customer returns by 40%. Using the BrightBrew figures (1,200 internal faults, 300 returns, refunds/replacements costing £4,500), calculate how many fewer customer returns BrightBrew would expect and estimate the monthly saving on external failure costs if each return costs on average £15 in refunds/replacements. Show your working.

(Total for Question 5 is 3 marks)

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Mark scheme · 2.6 Quality Management: Total Quality Management and Cost of Quality: Test Pack

Question 1

a concise definition stating TQM is an organisation-wide approach involving all employees aiming for continuous improvement and prevention of defects	**B1**

Answer: An organisation-wide approach involving all employees to achieve continuous improvement and prevent defects, aiming for high quality throughout the business.

Question 2

training employees to avoid defects	**B1**
process design or preventive maintenance to reduce faults	**B1**

Answer: Training employees; improved process design or preventive maintenance to reduce the chance of faults.

Question 3

C cao	**B1**

Answer: C

Question 4

identifies a benefit, e.g. workers suggest improvements to processes	**B1**
develops the point, e.g. staff are familiar with day-to-day causes of defects and can propose practical changes	**B1**
links to an outcome, e.g. fewer defects, better quality and lower failure costs	**B1**

Answer: Quality circles let staff suggest process improvements; because staff know the everyday causes of defects they can propose practical changes, leading to fewer faulty products and lower failure costs.

Question 5

300 x 0.40 or 300 - (300 x 0.40) seen to find fewer returns (= 120 fewer returns)	**M1**
120 x 15 seen to find saving in pounds	**M1**
£1,800 cao saving per month	**A1**

Answer: 120 fewer returns, saving £1,800 per month.

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