

- c. Which product has greater availability?
4. Suppose you manufacture 10,000 wooden pencils per day. Describe a quality planning and control system for this product including possible attributes, measures of quality, tests, etc.
  5. Suppose you own and operate a small appliance repair service. Give an example of a quality policy which addresses all the important issues.
  6. Give some examples of quality objectives for Question 5.
  7. Name some products or services which in your opinion have relatively poor quality.
  8. Name some products which have a high degree of quality. Are these products generally associated with successful companies?
  9. What are the pros and cons of placing the quality department under the operations manager?
  10. The following costs have been recorded:

Incoming materials inspection	\$20,000
Training of personnel	40,000
Warranty	45,000
Process planning	15,000
Scrap	13,000
Quality laboratory	30,000
Rework	25,000
Allowances	10,000
Complaints	14,000

- What are the costs of prevention, appraisal, external failure, and internal failure?
11. Suppose the following cost functions are available for a particular product.

$$\text{Cost of failure } F = 1500 + 40X$$

$$\text{Cost of control } C = \frac{3080}{X}$$

where  $X$  = percent defective

What is the minimum cost of quality and the optimal percent defective?

12. How does the minimum-percent-defective philosophy agree with the idea of zero defects?
13. The cost of quality and volume figures for a hotel are as follows:

	1979	1980
Cost of quality	\$100,000	\$150,000
Sales	\$1,000,000	\$1,700,000
Number of customers	50,000	80,000
Direct labor cost	800,000	1,200,000

Has the unit cost of quality increased or decreased?

14. How could a zero defects policy be applied to student term papers?
15. Which of the Deming's 14 points do you agree with and which ones do you disagree with?
16. Contrast and compare the Deming and Crosby approaches to quality improvement.
17. Why are quality circles or teams frequently needed to improve quality?
18. Is there a cultural basis for quality which the Japanese have utilized, or is there another explanation for their success in quality improvement?