

Question 1:

C. A. Ratchet, the local auto mechanic, finds that it usually takes him 2 hours to diagnose and fix a typical problem. What is his daily productivity (assume an 8 hour day)?

Mr. Ratchet believes he can purchase a small computer trouble-shooting device, which will allow him to find and fix a problem in the incredible (at least to his customers!) time of 1 hour. He will, however, have to spend an extra hour each morning adjusting the computerized diagnostic device. What will be the impact on his productivity if he purchases the device?

Answer:

Starting productivity: $= \frac{2 \text{ hours per problem}}{8 \text{ hour day}} = 4 \text{ problems / day}$

Productivity with computer $= \frac{1 \text{ hour per hour}}{7 \text{ hour day}} = 7 \text{ problems / day}$

Productivity improvement $= \frac{7 - 4}{4} = \frac{3}{4} = 75 \% \text{ improvement}$

Question 2:

List the three major business functions necessary to all organizations.

A) _____

Which has the greatest potential to increase productivity and why?

B) _____

Answer:

A) Finance, Operations, Marketing

B) Management

Question 3:

Operations managers are called upon to support the organization's strategy. OM does this with some combination of one of three strategies. What are these three strategies?

Answer: Low cost leadership, Differentiation, Responsiveness

Question 4:

The difference between a business using a Multi-Domestic Strategy and one using an International Strategy is:

- A) There is no difference.
- B) The International business uses standardized product.
- C) The Multi-Domestic business has significant local responsiveness to issues.
- D) The International Business has sites in a large number of countries.

Answer: C) The Multi-Domestic business has significant local responsiveness to issues.

Question 5:

True or False: The use of foreign markets allows manufacturers to extend the life cycle of their products?

Answer: True

Question 6:

True or False: A process map can identify the root cause of an issue?

Answer: False

Question 7:

List 4 of the 5 M's (cause categories) used in a Cause and Effect diagram.

Answer: Machine, Manpower, Material, Measurement, Methods

Question 8:

The Operations function trains personnel and builds pilot units during this phase of new product development:

- A) Commercial Preparation
- B) Planning
- C) Concept Development
- D) Launch
- E) Design and Development

Answer: A) Commercial Preparation

Question 9:

The proper sequence of the 5 stages in the “New Product Development Process” is:

Answer: Concept Development, Planning, Design and Development, Commercial Preparation, Launch

Question 10:

The accounts receivable department has documented the following defects over a 30 day period:

Category	Frequency
Invoice amount does not agree with the check amount	108
Invoice not on record or not found	24
No formal invoice issued	18
Check or payment not received on time	30
Check not signed	8
Invoice number and invoice referenced do not agree	12

What techniques would you use and what conclusions could you draw about defects in the accounts receivable department?

Answer: Use a Pareto chart to organize the defects (most to least) and conclude that the obvious problem (about half the defects) is the failure of the check to agree with the company's records as to the correct amount. Notice that the next 27% of these common errors appear to be the result of procedural problems within accounts receivable (invoice not on record, no invoice issued, and invoice numbering problems).

Question 11:

Which of these is NOT an advantage of new product or service development?

- A) New products or services can block out competitors
- B) New products or services can help a company exploit existing capabilities
- C) New products or services can be developed sequentially
- D) New products or services can give firms a competitive advantage in the market

Answer: C) New products or services can be developed sequentially

Question 12

The WonderCup™ was designed to hold any beverage and fit any hand size. The designers made it easy to manufacture, so they could use virtually any contract producer. The designers obviously used:

- A) Quality function deployment
- B) Supply Chain design
- C) Robust design or repeatability
- D) CAD

Answer: C) Robust design or repeatability

Question 13

A more formal term for “standardization in chunks” is:

- A) Design for manufacturability
- B) Value analysis
- C) Modular architecture
- D) Pre-sourcing

Answer: C) Modular architecture

Question 14

True or False: Total development time is lower using concurrent engineering than using a sequential development process.

- A) True
- B) False

Answer: True

Question 15

- A) What is TQM? _____
 - B) The six sigma methodology used in TQM is called: D M ____
 - C) **Bonus:** What do the five letters in D M ____ stand for?
- _____

Answer:

A) Total Quality Management. Management of an entire organization so that it excels in all aspects of products and services that are important to the customer. *(Study hint...when given an acronym or shortform, tell us what it stands for THEN also define it)*

B) A, I, C

C) Define, Measure, Analyze, Improve, Control

Question 16

Quality is defined as:

- A) The totality of features and characteristics of a product that bear on its ability to satisfy stated or implied needs
- B) The degree of excellence at an acceptable price and the control of variability at an acceptable cost
- C) How well a product fits patterns of consumer preferences
- D) Even though it cannot be defined, you know what it is

Answer: A) The totality of features and characteristics of a product that bear on its ability to satisfy stated or implied needs.

Question 17

In which of the four major categories of quality costs would the costs associated with scrap and rework belong?

- A) Prevention
- B) Internal failure
- C) External failure
- D) Appraisal

Answer: B) Internal failure

Question 18

One determinant of service quality is _____, which means the firm performs the service right the first time and that the firm honours its promises.

- A) Responsiveness
- B) Credibility
- C) Reliability
- D) Competence

Answer: C) Reliability

Question 19

True or False: ISO 14000 provides an international standard for quality management.

Answer: False – it is an Environmental Management Standard.

Question 20

List 5 of the 7 tools used for TQM.

Answer: Check Sheet, Scatter Diagram, Cause & Effect Diagram, Pareto Chart, Flow Chart, Histogram, Statistical Process Control Chart