

Test Bank for Quality Management in the Imaging Sciences 6th Papp

Chapter 2: Quality Improvement Tools and Procedures

Evolve Resources for Quality Management in the Imaging Sciences, 6th Edition

MULTIPLE CHOICE

1. Which of the following is a pictorial representation of a frequency distribution?
 - a. Pareto chart
 - b. Fishbone chart
 - c. Histogram
 - d. Scatter plot

ANS: C

A histogram is a data display tool in the form of a bar graph that often plots the most frequent occurrence of a quantity in the center.

2. The range of variation around the mean is called
 - a. variance.
 - b. standard deviation.
 - c. percentile.
 - d. range.

ANS: B

The standard deviation is the range of variation or dispersion of a set of values surrounding the mean.

3. The number of items actually measured from a population is called a
 - a. sample.
 - b. data set.
 - c. frequency.
 - d. range.

ANS: A

A sample is the number of items actually measured from a population.

4. Which of the following terms best describes the average set of observations?
 - a. Mean
 - b. Median
 - c. Mode
 - d. Varian

ANS: A

The **mean** is the calculated average set of observations.

5. Which of the following terms best describes variables that have only two values or choices?
 - a. Continuous variables
 - b. Dichotomous variables
 - c. Stochastic variables
 - d. Statistical variables

ANS: B

Dichotomous variables are those variables being studied that have only two opposing choices.

6. A cause-and-effect diagram is also known as which of the following?
- Fishbone chart
 - Pareto chart
 - Trend chart
 - Scatter plot

ANS: A

A **cause-and-effect diagram** is a causal analysis tool (also called a *fishbone chart* or *Ishikawa diagram*).

7. Which of the following terms best describes a chart that pictorially demonstrates whether key indicators are moving up or down over a given period of time?
- Histogram
 - Pareto chart
 - Trend chart
 - Scatter plot

ANS: C

A **trend chart** (also called a *run chart* or *run-sequence plot*) pictorially demonstrates whether key indicators are moving up or down over a given period of time, on an ongoing basis.

8. Which of the following is not a tool for data presentation?
- Control charts
 - Brainstorming
 - Pareto charts
 - Cause-and-effect diagrams

ANS: B

Brainstorming is a group process used to develop a large collection of ideas without regard to their merit or validity.

9. How many basic steps are involved in the creation of a TPM?
- 3
 - 5
 - 7
 - 10

ANS: B

There are five basic steps to create a TMP.

10. A procedure to identify potential failure within a system is
- SWOT
 - FMEA
 - Six Sigma
 - FOCUS-PDCA

ANS: B

A **Failure Mode and Effects Analysis (FMEA)** is a procedure for analysis of potential failure within a system.