

Chapter 1 Solutions

True or False

1. Engineering design involves both analysis and synthesis.
TRUE
2. A component can either be a part or a subassembly.
TRUE
3. Design criteria serve to establish maximum, minimum, or permissible ranges for physical or operational properties of a design.
FALSE
4. Design for manufacture and assembly (DFMA) guidelines include the minimization of the number of parts in a product.
TRUE

Multiple Choice

5. Which of the following is not a stage of the product development process?
 - a. Sales/Marketing
 - b. Industrial design
 - c. Engineering design
 - d. Product design
 - e. Manufacturing**
6. A good problem statement includes:
 - a. An undesired initial state
 - b. A desired goal state
 - c. Obstacles that prevent going from the undesired to the desired state
 - d. All of the above**
7. Design _____ are used to qualitatively judge alternative design solutions.
 - a. Specifications

b. Criteria

c. Constraints

d. Phases