NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PD:\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_

**Engineering Design Process Pre/Post-Assessment**

1. Technologists and engineers use the design process to find \_\_\_\_\_\_.
   1. solutions to technological problems.
   2. other professionals to work with
   3. less expensive methods of conducting research.
2. Which step in the design process uses a decision matrix?
   1. Present Solution
   2. Develop a Solution
   3. Construct and Test Prototype
3. The Design Process is a \_\_\_\_\_\_ solving method.
   1. technology
   2. scientific
   3. problem
4. Which step in the design process uses or creates a design brief?
   1. Present Solution
   2. Define the Problem
   3. Generate Concepts
5. A bill of materials should include (choose all correct answers):
   1. Unit of Measurement
   2. Quantity
   3. Description of Material
6. When solving a problem using the design process, it is likely you will \_\_\_\_\_\_\_\_\_\_.
   1. not be able to determine a single solution.
   2. make several attempts before finding the best solution.
   3. find the best solution the first time.
7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the creation of a product or introduction of a process for the first time.
   1. Problem Solving
   2. Innovation
   3. Invention
8. A \_\_\_\_\_\_ is used to rate design ideas against each other.
   1. Decision Matrix
   2. Venn Diagram
   3. Survey
9. A technical drawing is used in "Develop a Solution" and should include (choose all correct answers):
   1. Illustration of the final product
   2. Directions
   3. Title
   4. Bill of Materials
10. A functional replica of a solution that is suitable for testing is a \_\_\_\_\_\_\_\_\_.
    1. Prototype
    2. Model
    3. Sketch
11. A scaled down replica of a solution that is not suitable for testing and is more for a visual evaluation of the design is a \_\_\_\_\_\_\_\_\_.
    1. Prototype
    2. Model
    3. Sketch
12. The limitations of a design are called \_\_\_\_\_\_\_\_.
    1. Considerations
    2. Criteria
    3. Constraints
13. The steps of the design process are arranged \_\_\_\_\_\_ .
    1. around a loop
    2. randomized set of steps
    3. single path system
14. There are \_\_\_\_\_ steps in the design process.
    1. 4
    2. 6
    3. 8
15. Number the steps of the design process in order, with “1” being the start and “6” being the end.  
    \_\_ Generate Concepts  
    \_\_ Present Solution  
    \_\_ Develop a Solution  
    \_\_ Construct and Test Prototype  
    \_\_ Evaluate Solution  
    \_\_ Define Problem
16. What negative consequences could result if a designer/engineer does not pay attention to the criteria/constraints provided by the client?
17. “A cell phone is an innovation… not an invention!” Argue for or against this statement.