Assessment

Engineering Design with Piper - Lesson 4.4 Formative Assessment

1) What is a prototype?
    a) A model you build to test and improve your ideas before making the final version.
    b) A finished product ready for market release.
    c) A design that is purely conceptual without any physical build.
    d) A final version that doesn't require any further testing.

2) What purpose does a prototype serve?
    a) It is used to sell the product directly without further modification.
    b) It represents the exact, unchangeable final product.
    c) It helps you see if your design works as expected and make changes if needed.
    d) It serves only as a decoration or showcase.

3) In engineering, the design process begins when...
    a) The engineer receives instructions to start building without any planning.
    b) A design engineer recognizes the need for a solution to a problem.
    c) The final product is already being assembled.
    d) Testing different solutions begins without understanding the problem.

4) Identifying the target audience occurs during which step of the engineering design process?
    a) During the final assembly of the product.
    b) When identifying the needs and constraints.
    c) After testing the prototype.
    d) During the brainstorming phase, without considering the problem.

5) When finding the solution to an engineering design problem, there is/are usually...
    a) Only one correct solution.
    b) No correct solutions, only compromises.
    c) A need to abandon the problem if the first solution doesn't work.
    d) Many possible correct solutions.

6) What kinds of problems may be solved using the knowledge you've gained in the projects?
    a) Any problem that could be solved with an item or product that you designed.
    b) Only problems related to coding and programming.
    c) Problems that require purely theoretical solutions without building anything.
    d) Problems that involve solving mathematical equations only.

7) Explain why empathy is an important factor in engineering and game design.