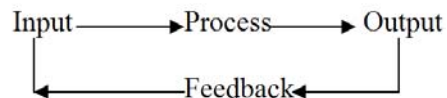


Part A - Multiple Choice

Directions: This is a **CLOSED-BOOK/CLOSED-NOTES** exam. Select the letter of the response which best completes the item or answers the question.

- Who is responsible for designing most products used in today's society?
 - Technicians
 - Engineers
 - Carpenters
 - Presidents of corporations
- _____ is a step in the design process that involves reassessing the design specifications, implementing modifications, and updating drawings.
 - Conceptualization
 - Optimization
 - Development and implementation
 - Design Analysis

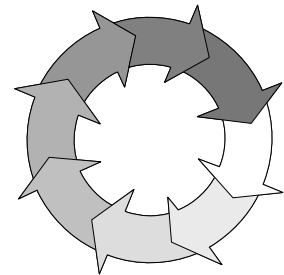
- Which of the following is represented by the diagram to the right?



- Constraint boundaries
 - Open Loop System
 - Closed Loop System
 - Serendipity cycle
- What engineering method uses a logical sequence of steps that begins with a specific problem, or perceived need, and results in a solution?
 - Data collection
 - Innovation
 - Brainstorming
 - Design process

- What principle of design involves a gradual change from one feature of the design to another?

- Subordination
- Transition
- Repetition
- Proportion



- What principle of design is being considered when sketching a bicycle tire in relationship to the size of its frame?

- Proportion
- Repetition
- Unity
- Subordination

- A(n)_____ is a list of the topics covered in someone's written work.

- appendix
- table of contents
- biography
- glossary

8. An organized collection of your best work during a class or major project is called a(n)_____.

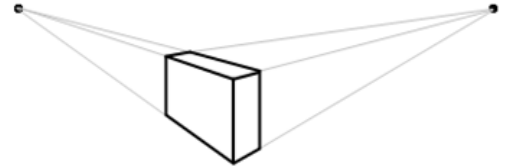
- A. design diary.
- B. engineering notebook.
- C. portfolio.
- D. experience log.

9. What type of line is used in an orthographic sketch to project the size of an object from one view to another?

- A. Section Line
- B. Object Line
- C. Construction Line
- D. Extension Line

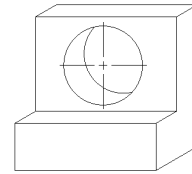
10. Identify the sketch type shown to the right.

- A. Cavalier Oblique
- B. Isometric
- C. Two point perspective
- D. Cabinet Oblique



11. What 3-dimensional sketch is drawn true size in its height and width but foreshortened in its depth, as illustrated to the right?

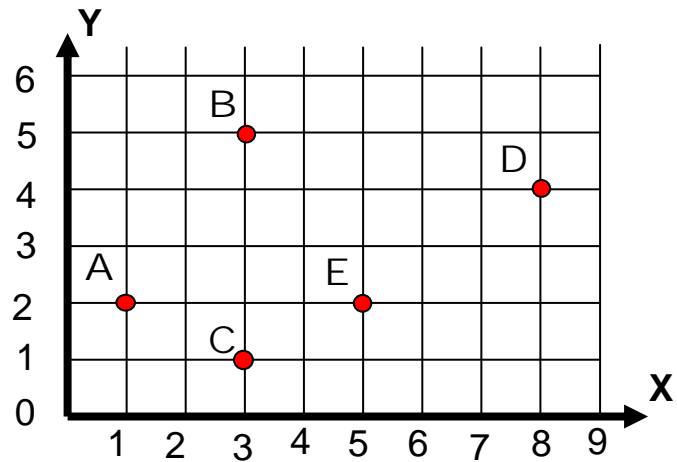
- A. Cavalier Oblique
- B. Isometric
- C. Two-point perspective
- D. Cabinet Oblique



12. A line touching an arc or circle at only one point perpendicular to the arc's radius is said to be _____.

- A. tangent.
- B. coincident.
- C. parallel.
- D. concentric.

13. What are the relative coordinates of **POINT D** if moving from Point B?



- A. (8, 4)
- B. (5, -1)
- C. (1, -5)
- D. (4, 8)