**Chapter 01 Problems: The Design Process KEY**

1. Graphics is used in the engineering design process for

A. communicating.

B. conducting analyses.

C. solving problems.

**D.** All of these choices are correct

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2. Which is not a geometry that is considered a foundation for technical graphics?

**A.** Relative

B. Descriptive

C. Analytic

D. Plane

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3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ are commonly accepted practices, rules, or methods.

A. Standards

B. Laws

**C.** Conventions

D. Habits

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4. Which of the following input devices does not translate hand movements into instructions for the computer?

**A.** Scanner

B. Mouse

C. Keyboard

D. Tablet and puck

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5. In a VR system, all of the following statements about immersiveness are true, except

A. response time is an important factor.

B. both display resolution and display size can affect it.

**C.** the visual sense is the only sense to affect it.

D. tracking body movement is an important factor.

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6. All of the following are part of the refinement process except

A. modeling.

B. design analysis.

**C.** problem identification.

D. design visualization.

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7. Which type of model is likely to be created with a rapid prototyping system?

A. Mathematical model

B. Wireframe model

C. Surface model

**D.** Physical model

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8. Which of the following is considered a type of mechanism analysis?

A. Functional analysis

**B.** Kinetic analysis

C. Finite element analysis

D. Human factors analysis

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9. Which of the following would be used to help determine the spacing between earpiece and mouthpiece on a phone?

A. Dynamic analysis

B. Kinetic analysis

C. Finite element analysis

**D.** Human factors analysis

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10. All of the following are part of the implementation phase, except

**A.** modeling.

B. documenting.

C. servicing.

D. marketing.

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11. Which of the following would be a typical use for Product Data Management?

A. Tracking potential clients by Marketing

B. Generating variations of a preliminary design

**C.** Searching for how many designs used a particular fastener

D. Evaluating the strength of a rib support on a cast piece

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12. Which method of analysis takes into account forces acting on the model?

A. Kinetics

B. Mass-properties

**C.** Dynamics

D. Process planning

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13. Product Lifecycle Management (PLM)

A. is a new term for Product Data Management (PDM).

**B.** includes all parts of the company, including marketing and finance.

C. is the management of phasing a product out of production.

D. involves all product processes outside of product development.

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14. In engineering, 8% of the design process is graphically based.

**FALSE**

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15. Graphics is confined to only one part of the engineering design process.

**FALSE**

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16. The American Society for Mechanical Engineers (ASME) assists the American National Standards Institute (ANSI) in defining standards.

**TRUE**

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17. Visualization of geometric information is an important use for technical graphics.

**TRUE**

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18. The use of technical graphics is restricted primarily to mechanical engineering.

**FALSE**

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19. A drawing using a metric scale is clearly labeled with the word METRIC on it.

**TRUE**

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20. Both aesthetic and functional design play a role in the product development process.

**TRUE**

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21. Ideation is structured approach to problem solving.

**TRUE**

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22. Engineering design always involves the design of products, not processes.

**FALSE**

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23. Concurrent engineering is a nonlinear, team approach to design.

**TRUE**

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24. Refinement is a linear process where a design is taken from a rough concept to a final design in a single pass.

**FALSE**

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25. Hand rendered illustrations are the preferred medium for patent drawings.

**FALSE**

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26. Visualization techniques are only used very early in the engineering design process to explore new product concepts.

**FALSE**

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27. Product Lifecycle Management (PLM) is an integrated information technology.

**TRUE**

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**Chapter 01 Problems: The Design Process Summary**

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