**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

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.01 Introduction*

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

**A.** Relative

B. Descriptive

C. Analytic

D. Plane

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.02 Importance of Graphics in the Design Process*

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

A. Standards

B. Laws

**C.** Conventions

D. Habits

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.09 Standards and Conventions*

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

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.10 Graphic Communications Technologies*

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.

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.10 Graphic Communications Technologies*

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

A. modeling.

B. design analysis.

**C.** problem identification.

D. design visualization.

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.05 Refinement*

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

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.05 Refinement*

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

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.05 Refinement*

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

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.05 Refinement*

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

**A.** modeling.

B. documenting.

C. servicing.

D. marketing.

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.07 Implementation*

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

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.08 Other Engineering Design Methods*

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

A. Kinetics

B. Mass-properties

**C.** Dynamics

D. Process planning

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.05 Refinement*

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.

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.08 Other Engineering Design Methods*

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

**FALSE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.01 Introduction*

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

**FALSE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.03 The Engineering Design Process*

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

**TRUE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.09 Standards and Conventions*

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

**TRUE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.02 Importance of Graphics in the Design Process*

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

**FALSE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.02 Importance of Graphics in the Design Process*

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

**TRUE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.03 The Engineering Design Process*

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

**TRUE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.02 Importance of Graphics in the Design Process*

21. Ideation is structured approach to problem solving.

**TRUE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.04 Ideation*

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

**FALSE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.03 The Engineering Design Process*

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

**TRUE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.03 The Engineering Design Process*

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

**FALSE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.05 Refinement*

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

**FALSE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.07 Implementation*

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

**FALSE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.02 Importance of Graphics in the Design Process*

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

**TRUE**

*Accessibility: Keyboard Navigation
Chapter: 01 The Design Process
Section: 01.03 The Engineering Design Process*

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

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| --- | --- |
| *Category* | *# of Questions* |
| Accessibility: Keyboard Navigation | 27 |
| Chapter: 01 The Design Process | 27 |
| Section: 01.01 Introduction | 2 |
| Section: 01.02 Importance of Graphics in the Design Process | 5 |
| Section: 01.03 The Engineering Design Process | 5 |
| Section: 01.04 Ideation | 1 |
| Section: 01.05 Refinement | 6 |
| Section: 01.07 Implementation | 2 |
| Section: 01.08 Other Engineering Design Methods | 2 |
| Section: 01.09 Standards and Conventions | 2 |
| Section: 01.10 Graphic Communications Technologies | 2 |