

1. Hidden lines are drawn as

- (a) dashed narrow lines
- (b) dashed wide lines
- (c) long-dashed dotted wide line
- (d) long-dashed double dotted wide line

Ans: (a)

2. Line composed of closely and evenly spaced short dashes in a drawing represents

- (a) visible edges
- (b) hidden edges
- (c) hatching
- (d) pitch circle of gears

Ans: (b)

3. Lettering on a drawing sheet should have

- (a) all alphabets in capital letters
- (b) all alphabets in small letters
- (c) In a sentence only first alphabet in capital letter
- (d) In a sentence only abbreviations are capital letter

Ans: (a)

4. The line connecting a view to note is called

- (a) dimension line
- (b) projection line
- (c) leader
- (d) arrowheads

Ans: (c)

5. The dimension figure for radius of a circle should be preceded by

- (a) R
- (b) CR
- (c) SR
- (d) RAD

Ans: (b)

6. The recommended method of dimensioning a sphere with diameter 80 mm is

- (a) $80\phi S$
- (b) $\phi 80S$
- (c) $S80\phi$
- (d) $S\phi 80$

Ans: (d)

7. Methods of arrangement of dimensions includes

- (a) Parallel, continuous and combined
- (b) Perpendicular, parallel and combined
- (c) Perpendicular, continuous and combined
- (d) Perpendicular, parallel and continuous

Ans: (a)

8. Superimposed dimensioning is a simplified method of

- (a) chain dimensioning
- (b) parallel dimensioning
- (c) combined dimensioning
- (d) tabular dimensioning

Ans: (b)

9. A curve drawn for Boyle's law ($PV = \text{constant}$) on a P-V chart has a characteristic shape of

- (a) ellipse
- (b) parabola
- (c) oblique hyperbola
- (d) rectangular hyperbola

Ans: (d)

10. The profile of a gear teeth is in the form of

- (a) parabola
- (b) involute
- (c) spiral
- (d) helix

Ans: (b)

11. When two angles together make 90° , they are called

- (a) obtuse angle
- (b) reflex angle
- (c) complementary angles
- (d) supplementary angles

Ans: (c)

12. The included angle of a hexagon is

- (a) 30°
- (b) 60°
- (c) 120°
- (d) 150°

Ans: (c)

13. The curve generated by a point on the circumference of a circle, which rolls without slipping along outside of another circle is known as

- (a) Hypocycloid
- (b) Epicycloid
- (c) Cycloid
- (d) Trochoid

Ans: (b)

14. In orthographic projections, the rays are assumed to

- (a) diverge from station point
- (b) converge from station point
- (c) be parallel
- (d) None of these

Ans: (c)

15. If an object lies in third quadrant, its position with respect to reference planes will be

- (a) in front of V.P, above H.P
- (b) behind V.P., above H.P.
- (c) behind V.P., below H.P.
- (d) in front of V.P., below H.P.

Ans: (c)

16. If the Vertical Trace (V.T.) of a line lies 30 mm above reference line (XY), then its position will be

- (a) 30 mm in front of V.P.
- (b) 30 mm behind V.P.
- (c) 30 mm above H.P.
- (d) 30 mm below H.P.

Ans: (c)

17. When an object is cut by a section plane parallel to H.P and perpendicular to V.P, then the sectional view of the object is obtained in

- (a) top view
- (b) front view
- (c) left side view
- (d) right side view

Ans: (a)

18. Which of the following object gives a circular section, when it is cut completely by a section plane (irrespective of the angle of the section plane)

- (a) Cylinder
- (b) Sphere
- (c) Cone
- (d) Circular lamina

Ans: (b)

19. Comparative scale is a pair of scale having a common

- (a) units
- (b) representative fraction
- (c) length of scale
- (d) least count

Ans: (b)

20. An angle can be set off and measured with the help of

- (a) plane scale
- (b) diagonal scale
- (c) comparative scale
- (d) Scale of chords

Ans: (d)

1. If a client of yours is having difficulty visualizing a design, what type of drawing would be the easiest to understand?

- A) axonometric
- B) three-view orthographic
- C) one-view orthographic
- D) bimetric

ANS: A

2. Which of the following is not a pictorial drawing?

- A) isometric
- B) multiview
- C) perspective
- D) axonometric

ANS: B

3. Which of the following projection methods does not use projectors perpendicular to the projection plane?

- A) isometric
- B) orthographic
- C) oblique
- D) axonometric

ANS: C

4. A circle will appear on an isometric drawing as a(n) _____ .

- A) ellipse
- B) cycloid
- C) circle
- D) parabola

ANS: A

5. An axonometric drawing which has two axes divided by equal angles is:

- A) dimetric
- B) trimetric
- C) orthographic
- D) isometric

ANS: A

6. An axonometric drawing which has all three axes divided by equal angles is:

- A) dimetric
- B) trimetric
- C) orthographic
- D) isometric

ANS: D

7. In a trimetric drawing, the relationship of the angle between axes to each other is:

- A) three are equal
- B) two are equal
- C) three are unequal
- D) none of the above

ANS: D

8. In an isometric sketch of a cube:

- A) the frontal face appears in its true shape
- B) the receding axes are at 45 degrees to the horizontal
- C) all faces are equally distorted
- D) only the depth distances must be reduced

ANS : C

9. In isometric drawings:

- A) Two axes are perpendicular
- B) True measurements can be made only along or parallel to the isometric axes
- C) All faces are unequally distorted
- D) None of the above

ANS: B

10. In an axonometric drawing, the projection rays are drawn _____ to each other and _____ to the plane of projection.

- A) parallel.....oblique
- B) oblique.....parallel
- C) parallel.....perpendicular
- D) parallel....parallel

ANS: C

11. One method of drawing an ellipse that represents an isometric pictorial circle is known as:

- A) the box construction method
- B) the coordinate construction method
- C) the four-center approximation method
- D) the offset construction method

ANS: A

12. Non-isometric lines are located and sketched how?

- A) They are drawn parallel to the isometric axis.
- B) They are measured using the angle from the multiview.
- C) They are measured using a non-isometric template.
- D) They are located by determining the endpoints of the non-isometric line.

ANS: D

13. In an oblique sketch of a cube:

- A) the frontal face appears in its true shape
- B) both receding axes are at 30 degrees to the horizontal
- C) all faces are equally distorted
- D) the depth distances must be reduced

ANS: A

14. In an oblique drawing, all of the following angles are commonly used for drawing the depth axis, except:

- A) 30°
- B) 45°
- C) 60°
- D) 90°

ANS : D

15. In an oblique drawing, the projection rays are drawn _____ to each other and _____ to the plane of projection.

- A) oblique.....oblique
- B) oblique.....parallel
- C) parallel.....oblique
- D) parallel....parallel

ANS: C

16. All of the following are processes (as opposed to input or output) in a manufacturing business except:

- A) Material
- B) Planning
- C) Documenting
- D) Designing

ANS: A

17. following operations can make use of the CAD database, except:

- A) Designing
- B) Marketing
- C) Producing
- D) None of the above

ANS: D

18. Which of the following is the responsibility of the production manager?

- A) people
- B) plants
- C) processes
- D) all of the above

ANS: D

19. 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

ANS: C

20. Which design process involves responding to the emotional needs of the consumer?

- A) aesthetic design
- B) functional design
- C) systems design
- D) e-business

ANS: A

21. Which network system gives outside vendors access to a company's internal network?

- A) Intranet
- B) Extranet
- C) Internet
- D) Outernet

ANS: B

22. All of the following are part of a typical design team, except:

- A) vendors
- B) quality control specialists
- C) manufacturing engineers
- D) accountants

ANS: D

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

- A) Scanner
- B) Mouse
- C) Keyboard
- D) 3D Mouse

ANS: A

24. Which type of output device creates images which look and feel like photographs?

- A) Electrostatic plotter
- B) Laser printer
- C) Dye-sublimation printer
- D) Inkjet plotter

ANS: C

25. Which tool can be used to draw a 90 degree angle?

- A) 30/60 triangle
- B) protractor
- C) drafting machine
- D) all of the above

ANS: D

26. Which set of lead grades has a grade out of sequence?

- A) H, HB, B, 3B
- B) 7B, H, F, 3H
- C) 6B, B, H, 4H
- D) 9H, HB, B, 2B

ANS: B

27. Which type of line is part of a dimension?

- A) break lines
- B) phantom lines
- C) extension lines
- D) cutting plane lines

ANS: C

28. Which type of line is particular to section drawings?

- A) break lines
- B) phantom lines
- C) extension lines
- D) cutting plane lines

ANS: D

29. Which angle cannot be made with either a 45 or 30/60 triangle or a combination of the two?

- A) 90
- B) 70
- C) 30
- D) 15

ANS: B

30. A drawing instrument set usually contains all of the following, except:

- A) bow compass
- B) scale
- C) dividers
- D) extra leads

ANS: B

31. Which of the following operating systems is used with CAD systems?

- A) DOS
- B) UNIX
- C) Linux
- D) all of the above

ANS: D

32. Which line type is thin and light?

- A) visible lines
- B) center lines
- C) construction lines
- D) all of the above

ANS: C

33. Which line type is thick and black?

- A) visible lines
- B) center lines
- C) construction lines
- D) all of the above

ANS: A

34. What type of sketches are typically used in the refinement stage of the design process?

- A) isometric
- B) document
- C) oblique
- D) ideation

ANS: B

35. What type of sketch incorporates convergence?

- A) isometric
- B) perspective
- C) oblique
- D) multiview

ANS: B

36. What type of sketch shows the front in true shape?

- A) isometric
- B) perspective
- C) oblique
- D) axonometric

ANS: C

37. What is the major difference(s) between perspective and parallel projection?

- A) Parallel projection can only be used with objects containing parallel edges.
- B) Perspective projection gives a more realistic representation of an object.
- C) Parallel projection is equivalent to a perspective projection where the viewer is standing infinitely far away.
- D) Perspective projection can only be used for creating oblique and not isometric pictorials.
- E) b and c

ANS: E

38. What type of sketch uses a miter line?

- A) a two-view multiview
- B) an isometric pictorial
- C) a three-point perspective pictorial
- D) a three-view multiview

ANS: D

39. Which type of line has precedence over all other types of lines?

- A) a hidden line
- B) a center line
- C) a visible line
- D) none of the above

ANS: C

40. Which statement(s) is true about the precedence of lines?

- A) a hidden line has precedence over a center line
- B) a center line has precedence over a visible line
- C) a visible line has precedence over a miter line
- D) all of the above

ANS: A

41. Where do the projection lines converge in a perspective sketch?

- A) the vanishing point
- B) the ground line
- C) the horizon line
- D) the eye point

ANS: A

42. When you want to make the letters of a line of text narrower, you would set its:

- A) aspect
- B) scale
- C) alignment
- D) font

ANS: A

43. When you want to make sure that all of the text stays to the right of a given point on the drawing, you would set its:

- A) aspect
- B) scale
- C) alignment
- D) font

ANS: C

44. Which of the following is typically represented in a drawing but does not have a true physical counterpart on the object?

- A) edge of planar surface
- B) edge of a circular face
- C) corner of a rectangle
- D) limiting element of a curved surface

ANS: D

45. A cutting plane normal to a face of a cube has to be _____ in order to cut an oblique face.

- A) rotated about one axis
- B) rotated about one axis and translated
- C) rotated about two axes
- D) rotated about two axes and translated

ANS: C

46. All of the following are variables involved in the use of image planes, except:

- A) the object being viewed
- B) the size of the object
- C) the eye of the viewer
- D) the image plane

ANS: B

47. 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

ANS: C

48. Imagine a "L" shaped face extruded into three dimensions. How many faces does it contain?

- A) seven
- B) eight
- C) ten
- D) six

ANS: B

49. Which type of variable is the following list: Texas, Utah, California, Delaware?

- A) Nominal
- B) Ordinal
- C) Scalar
- D) Vector

ANS: A

50. Which type of variable is the following list: Thinnest, Thin, Medium, Fat, Fattest?

- A) Nominal
- B) Ordinal
- C) Scalar
- D) Vector

ANS: B