

## Multiple Choice Questions (MCQ) on Engineering Drawing (Instruments)

The mini drafter serves the purpose of everything except

- a. Scales
- b. Set square
- c. Protractor
- d. Compass

(Ans:d)

During operation, the two arms of the drafter remain at

- a.  $45^\circ$
- b.  $90^\circ$
- c.  $180^\circ$
- d.  $270^\circ$

(Ans:b)

With the combination of T-square, the following angles can be drawn except

- a.  $15^\circ$
- b.  $25^\circ$
- c.  $45^\circ$
- d.  $105^\circ$

(Ans:b)

Which of the following compass is used to draw very large circles?

- a. Beam
- b. Large
- c. Bow
- d. Drop

(Ans:a)

Which of the following compass is used to draw small size circles?

- a. Beam
- b. Large
- c. Bow

- d. Drop

(Ans:d)

The designation of sheet of size 594 x 841 is

- a. A<sub>0</sub>
- b. A<sub>1</sub>
- c. A<sub>2</sub>
- d. A<sub>3</sub>

(Ans:b)

Which of the following is softest pencil?

- a. 2B
- b. 1B
- c. HB
- d. H

(Ans:a)

Which of the following is the lightest pencil?

- a. 2B
- b. 1B
- c. HB
- d. H

(Ans:d)

Which of the following is not used to fix drawing sheet on the board?

- a. Drawing pins
- b. Adhesive tapes
- c. Clips
- d. Thread

(Ans:d)

The main ingredients of pencil leads are

- a. Graphite and Clay
- b. Lead and Graphite
- c. Clay and Lead
- d. None of these

**(Ans:a)**

**This is how axonometric, oblique, and perspective sketches show objects:**

- [A.](#) Orthographically
- [B.](#) Pictorially
- [C.](#) Obliquely
- [D.](#) Parallel

Ans B

**This type of projection is when projectors are parallel to each other, but are at an angle other than 90 degrees to the plane of projection:**

- [A.](#) Oblique projection
- [B.](#) Perpendicular projection
- [C.](#) Aesthetic projection
- [D.](#) Angular projection

Ans A

**There are two main types of projection:**

- [A.](#) Parallel and Orthographic
- [B.](#) Station-point and Perspective
- [C.](#) Parallel and Convergent
- [D.](#) Perspective and Parallel

Ans D

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

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

ANS: B

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

The projection showing the front in the true shape and size is

- (a) isometric
- (b) perspective
- (c) oblique
- (d) axonometric

Ans: (c)

2. What type of line has precedence over all other types of lines?

- (a) hidden line
- (b) centre line
- (c) visible line
- (d) none of the above

Ans: (c)

3. Which is not a principal view?

- (a) front
- (b) bottom
- (c) auxiliary
- (d) left side

Ans: (c)

4. Inclined planes in a three-view drawing will appear as

- (a) two surfaces and one edge
- (b) one surface and two edges
- (c) three edges
- (d) foreshortened in each view

Ans: (d)

5. When a surface of an object is inclined to a plane of projection, it will appear in the view

- (a) foreshortened
- (b) in true size and shape
- (c) as a line

- (d) as a point

Ans: (a)

6. The top view of an object should typically be drawn

- (a) to the right of the front view
- (b) directly below the front view
- (c) anywhere on the same page
- (d) on a separate piece of paper

Ans: (b)

7. The top and right side views have common dimensions of

- (a) height and width
- (b) width and depth
- (c) height
- (d) depth

Ans: (a)

8. This type of projection is when projectors are parallel to each other, but are at an angle other than 90 degrees to the plane of projection:

- (a) perspective
- (b) oblique
- (c) aesthetic
- (d) angular

Ans: (b)

9. This is how axonometric, oblique, and perspective sketches show objects

- (a) Orthographically
- (b) Pictorially
- (c) Obliquely
- (d) Parallel

Ans: (b)

10. The primary unit of measurement for engineering drawings and design in the mechanical industries is the

- (a) millimeter
- (b) centimeter
- (c) meter
- (d) kilometer

Ans: (a)

11. This type of solid has two bases that are parallel equal polygons:

- (a) pyramid
- (b) prism
- (c) cone
- (d) torus

Ans: (b)

12. The solid having a polygon for a base and triangular lateral faces intersecting at a vertex is

- (a) pyramid
- (b) prism
- (c) cone
- (d) torus

Ans: (a)

13. This is formed where three or more surfaces intersect:

- (a) oblique
- (b) line
- (c) edge
- (d) vertex

Ans: (b)

14. These types of projectors converge at a vanishing point

- (a) perspective

- (b) parallel
- (c) orthographic
- (d) oblique

Ans: (a)

15. In oblique sketches, the most commonly used angles for receding lines are

- (a) 15 or 60 degrees
- (b) 15 or 75 degrees
- (c) 45 or 60 degrees
- (d) 45 or 75 degrees

Ans: (c)

16. Objects that are symmetric can be shown effectively using this type of section

- (a) quarter section
- (b) half section
- (c) full section
- (d) symmetric section

Ans: (b)

17. In this type of section, one quarter of the object is removed

- (a) revolved section
- (b) removed section
- (c) quarter section
- (d) half section

Ans: (d)

18. This type of section is limited by a break line

- (a) removed section
- (b) revolved section
- (c) broken-out section
- (d) half section

Ans: (c)

19. This type of section is not in direct projection from the view containing the cutting plane

- (a) revolved section
- (b) removed section
- (c) broken-out section
- (d) full section

Ans: (a)

20. An axonometric projection in which three perpendicular edges of the object make different angles with the plane of projection is called

- (a) isometric projection
- (b) diametric projection
- (c) trimetric projection
- (d) oblique projection

Ans: (c)