

SHORT ANSWER QUESTIONS

1. Define Engineering Graphics.
2. What are the advantages of AutoCAD?
3. What are the Engineering Drawing Equipments?
4. Define AutoCAD. What are the Draw commands and Modify Commands?
5. What are the function keys in AutoCAD? What is the use of Function Keys?
6. What are the methods to draw line?
7. List the Draw tools and modify tools.
8. Define conic sections.
9. What is the difference between plain scale and Diagonal Scale?
10. Define Cycloid and Involute.
11. What is epicycloid?
12. What is the difference between plain scale and diagonal scale?
13. Define representative factor.
14. Define projection. And types of projections.
15. What is the difference between first angle projection and Third angle projection?
16. Define section and Sectional plane?
17. What do you mean by four quadrants?
18. What is orthographic projection and why it is called so?
19. What is meant by the development of a solid?
20. What is an isometric projection?
21. Classify the methods of development of solids?
22. What is the difference between frustum and truncated?
23. What are the advantages of isometric Projections?
24. What is the advantage of isometric drawing over isometric projection?
25. What is the difference between isometric view and isometric projection?

LONG ANSWER QUESTIONS

1. A fixed point is 50mm away from a fixed line. Draw the path traced by a point P moving such that its distance from the fixed point is EQUAL its distance from the fixed line.
2. A fixed point is 50mm away from a fixed line. Draw the path traced by a point P moving such that its distance from the fixed point is $\frac{3}{2}$ times its distance from the fixed line.
3. A fixed point is 50mm away from a fixed line. Draw the path traced by a point P moving such that its distance from the fixed point is $\frac{2}{3}$ times its distance from the fixed line.
4. A Circle of 50mm diameter rolls along a straight line without slipping. Draw the curve traced out by a point P on the circumference, for one complete revolution of the circle. Name the Curve. Draw a tangent to the curve at a point on it 40mm from the line.
5. Draw locus (one cycle) of a point (P) on the periphery of a circle (diameter=50 mm) which rolls on straight line path.
6. Draw locus of a point on the periphery of a circle (dia=50mm) which rolls on a curved path (radius 75 mm).
7. Draw the involute of a square of side 30mm.
8. Draw the Involute of triangle of 30mm.

9. Construct a scale of 1:5 to show decimetres (dm) and centimetres (cm) and read up to 1 meter. Show 7.6 dm on it.
10. Construct a diagonal scale 1/50, showing metres, decimetres and centimetres, to measure up to 5 metres. Mark a length 4.75 m on it.
11. Construct a scale of 1:40 to read metres and decimetres and long enough to measure 6 m. Mark on it a distance of 4.7 m.
12. Construct a diagonal scale of 3: 200 i.e. 1:66 showing meters, decimetres and centimetres and to measure upto 6 metre.
13. Point 'A' is located 75 mm above HP and 125 mm in front of VP. Draw its Projections.
14. Point 'B' is located 50 mm above HP and 150 mm behind VP. Draw its Projections.
15. Point 'C' is located 100 mm below HP and 100 mm behind VP. Draw its Projections.
16. Point 'D' is located 125 mm below HP and 75 mm in front of VP. Draw its Projections.
17. Draw the projections of a point A lying on H.P. and 30 mm in front of V.P. Draw its projections.
18. Draw the projections of a point B lying on H.P. and 40 mm in front of V.P. Draw its projections.
19. Draw the projections of a point A lying on V.P. and 35 mm above H.P. Draw its projections.
20. Draw the projections of a point F which lies in both the H.P. and V.P. Draw its projections.
21. Draw the orthographic projections of the following points? (a.) Point P is 30 mm. above H.P and 40 mm. in front of VP (b.) Point Q is 25 mm. above H.P and 35 mm. behind VP (c.) Point R is 32 mm. below H.P and 45 mm behind VP (d.) Point S is 35 mm. below H.P and 42 mm in front of VP (e.) Point T is in H.P and 30 mm behind VP (f.) Point U is in V.P and 40 mm. below HP (g.) Point V is in V.P and 35 mm. above H.P (h.) Point W is in H.P and 48 mm. in front of VP
22. 50mm long line AB is parallel to both H.P and V.P. The line is 25mm in front of V.P and 60mm above H.P, draw the projections of the line.
23. A 60mm long line AB has its end A at a distance of 20mm above the H.P. The line is perpendicular to the H.P and 40mm in front of V.P, draw the projections of the line.
24. An 80mm long line AB has the end A at a distance of 20mm above HP and 40mm in front of V.P. The line is inclined at 30 deg to H.P and parallel to V.P, draw the projection of the line.
25. An 80mm long line AB is inclined at 30 deg to V.P and is parallel to H.P. The end A is 20mm above the H.P and 20mm in front of the V.P, draw the projection of the line.
26. A line AB 60mm long is situated in H.P and inclined to V.P at 30 deg. The end A is 20mm in front of V.P, draw the projection of line.
27. A Square plane with a 40mm side has its surface parallel to and 20mm above the HP. Draw its Projections, when (a) A side is parallel to VP (b) A side is inclined at 30° to VP.
28. An equilateral triangle of 50mm side has its V.T. parallel to and 25mm above xy. It has no H.T. Draw its projections when one of its sides is inclined at 45° to the V.P.
29. Draw the projections of (a) a Cylinder, base 40mm diameter and axis 50mm long and (b) a cone, base 40 mm diameter and axis 50mm long, resting on the H.P on their respective bases.
30. A hexagonal prism of side 25 mm and height 55 mm is resting on its base on the HP with one rectangular face is parallel to VP. Draw its projections.
31. A rectangular prism, side of base 40 mm X 25 mm and height 60 mm, rests with its base on HP such that one of its larger rectangular faces is parallel to VP. A section plane perpendicular to HP and parallel to VP cuts the prism into two equal halves. Draw its top view and sectional front view.
32. A cube of 40 mm side is cut by a horizontal section plane, parallel to H.P at a distance of 15 mm from the top end. Draw the sectional top view and front view.
33. A cube of 35mm long edges is resting on the H.P. on the one of its faces with a vertical face inclined at 30° to the V.P. It is cut by a section plane parallel to the V.P. and 9mm away from the axis and further away from the V.P. Draw its Sectional front view and sectional top view.

34. A pentagonal pyramid, base 30mm side and axis 65mm long has its base horizontal and an edge of the base parallel to the V.P. A Horizontal section plane cuts it at a distance of 25mm above the base. Draw its front view and sectional top view.
35. A cone diameter is 40mm and axis 50mm rests on its base on HP. It is cut by a plane parallel to HP at 25mm above the base. Draw its sectional top view.
36. A cylinder with 50mm base diameter and 60mm long axis is resting on its base on HP. It is cut by a plane parallel to HP at 40mm above HP. Draw its front view and sectional top view.
37. A hexagonal pyramid, base 25mm side and axis 55mm long has its base on the HP with two edges of the base parallel to the V.P. A cutting plane parallel to HP cuts the pyramid at a height of 25mm from the base. Draw its front view and sectional top view.
38. A Pentagonal Prism of base 20mm side and axis 40mm long rests on H.P on its base with its axis perpendicular to H.P. It is cut by a sectional plane, inclined at 45° to the H.P. and bisects the axis. Draw the development of truncated portion of solids.
39. Draw the isometric view of a square of side 50mm.
40. Draw the isometric view of square prism, side of the base 20mm long and the axis is 40mm long, when its axis is (i) Vertical and (ii) Horizontal.

EG Lab Question Bank by Ms. J Divya