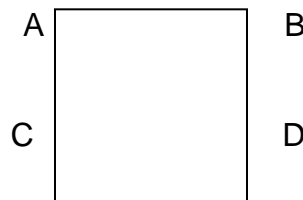


**FACULTY OF ENGINEERING****B.E. I-Year (Backlog) Examination, November 2020****Subject : Engineering Graphics****Time: 2 Hours****Max. Marks:100****PART – A****Note: Answer any Six questions.****(6 x 6=36 Marks)**

1. Define (a) Representative Fraction (b) Graphical Scale
2. Draw the involute of a square of length 40 mm
3. Draw the projections of the following points on a common reference line keeping the distance between their projectors 25mm apart.
  - (a) Point A 40 mm above the H.P. and 25 mm in front of V.P
  - (b) Point B 40 mm above the H.P. and on the V.P.
  - (c) Point C 25 mm in front of the V.P. and on the H.P.
  - (d) Point D 25 mm above the H.P. and 30 mm behind the V.P.
4. State the difference between first angle and Third Angle Projection.
5. Draw the projection of a pentagon having 40 mm side such that it is placed with one of its corners on H.P.
6. State the shape and number of faces in dodecahedron and icosahedrons
7. Draw the projections of a square prism, base 50 mm side and axis 60 mm long, resting on one of its bases on the H.P. with a vertical faced perpendicular to the V.P.
8. A cube of 50 mm long edges is resting on the H.P. with its vertical faces equally inclined to the V.P. Draw its projections.
9. The top view of a square of side 50 mm is given in the fig. below. Draw its isometric View.



10. Construct an isometric scale of length of 10cm

**PART – B****Note: Answer any Four questions.****(4 x 16=64 Marks)**

- 11.a) Construct a scale of 1:60 to show metres and decimetres and long enough to measure up to 6 metres. Mark on it a distance of 3.7 dm

- b) Draw an ellipse of major axis 50mm and minor axis 30 mm by are of a circle method. Also show the normal and tangent to the ellipse.
12. A line AB, 65mm long has its end A 20mm above the H.P. and 25 mm in front of the V.P. The end B is 40mm above the H.P. and 65 mm in front of the V.P. Draw the projections of AB and show its inclinations with H.P. and the V.P.
  13. Draw the projections of a regular hexagon 25 mm side. Having one of the sides in H.P. and inclined at  $60^\circ$  to the V.P. and its surface making an angle of  $45^\circ$  with H.P.
  14. A cylinder with a 50mm base diameter and a 70 mm along axis, has a generator in the V.P. and is inclined at  $45^\circ$  to the H.P. Draw its projections.
  15. A cone, diameter of the base 50mm and axis 50mm long is resting on its base on the H.P. It is cut by a section plane perpendicular to the V.P., inclined at  $75^\circ$  to the H.P. and passing through the apex. Draw its front view, sectional top view and true shape of the section.
  16. Draw the development of lateral surface of a square pyramid with a 40mm base side and a 60mm long axis which is resting on its base in the H.P. when all the sides of the base are equally inclined to the V.P.
  17. Draw an isometric view of a cylinder, with a 60 mm base diameter and 80mm long axis (a) when its axis is vertical and (b) when its axis is horizontal.

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