VASAVI COLLEGE OF ENGINEERING *(Autonomous)*, HYDERABAD
B.E. I Year I-Semester (Old) Examinations, December- 2015

Engineering Graphics-I

Time: 3 hours

Max. Marks: 70

*Note: Answer **ALL** questions in **Part-A** and any **FIVE** questions from **Part-B***

Part-A (10 X 2=20 Marks)

1) When Drawing is drawn of same size as of that object, the scale used is_____, and when the measurements are required in three units _____ scale is used.

2) Construct a plain scale of 1:2500 to read meters and long enough to measure 400m. Mark on it a distance of 270m.

3) Inscribe a hexagon in a circle having a 60 mm diameter when one of the sides of hexagon is vertical?

4) Give two practical applications for the following curves
   (a) Parabola   (b) Ellipse   (c) Hyperbola.

5) A point is 20 mm below H.P and lies in the third quadrant. Its shortest distance from xy is 40 mm. Draw its projection.

6) A line CD 20 mm long is parallel to V.P and perpendicular to H.P. Point C is 35 mm above H.P and 10 mm in front of V.P. Draw its projections

7) Define profile plane and its use in projections.

8) Show the traces of the plane, Perpendicular to V.P inclined at 30^0 to H.P

9) Define these words (a) Polyhedron (b) Solids of revolution

10) When the axis is perpendicular to H.P, and parallel to V.P, the base of solid is parallel to H.P. and the projection of the base on H.P shows _____.

Part-B (Marks: 5x10=50)

11) On the map of Nagpur city, a straight road from the zero mile to airport ,9 km long as shown by a 14 cm long line. A flyover bridge on this road starts at 300 m and ends at 2.1 km from the zero mile. The distance of important places, from the zero mile, onthis road are: Big bazaar 1.15 km, Sai Mandir 6.32 km. Construct a diagonal scale to show:
   (i) Length of flyover bridge.
   (ii) Distance between the zero mile and Big Bazar.
   (iii) Distance between the Big Bazar and Sai Mandir.

12) In a triangle ABC, AC and BC are 75mm each. Angle at C is 120^0. Draw parabola passing through A,B and C corners of the triangle.

13) A line AB has its end A 20mm above HP and the top view and front view lengths of the line are 60mm and 46mm respectively. The line makes 30^0 with HP and the VT of the line is 10mm above HP. Draw the projections.

14) A regular pentagonal plane of edges 30mm is resting on HP on one of its corners such that, the surface makes an angle of 60^0 to HP. The edge opposite to this corner makes an angle of 45^0 with VP. Draw its projections.

15) A pentagonal pyramid has one of its base edges in the HP with the triangular face containing that edge is perpendicular to HP and edge on which it is resting is inclined at 30^0 to VP. Draw its projections. Side of the base = 40 mm, height =75mm.

16) A line AB of 70 mm long , has its end A at 10mm above HP and 15mm in front of VP. Its front view and top view measures 50mm and 60mm respectively. Draw the projections of the line and determine its inclinations and mark traces.

17) A cone of 50mm base diameter, and 75mm height is resting on the H.P. on one of its generators with the axis making 45° with V.P. Draw its projections.

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