1. Write short notes on any three of the followings:
   a) Advantages of CAD
   b) Co-ordinate systems used in CAD
   c) Four drawing commands
   d) Four edit commands
   e) Solid modelling

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Roll No .....

ME-111

B.E. (All Branches) I Year II Semester

Examination, June 2016

Choice Based Credit System (CBCS)

Engineering Graphics

Time : Three Hours

Maximum Marks : 60

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Draw the projections of the following points on a common reference line keeping the distance between their projectors 30mm apart.
   i) Point A is 20mm below the H.P. and 50mm in front the V.P.
   ii) Point B is in the H.P. and 40mm behind the V.P.
   iii) Point C is 30mm in front of the V.P. and in the H.P.
   iv) Point D is 50mm above the H.P. and 30mm behind the V.P.

   b) The front and top views of a straight line PQ measures 50mm and 65mm, respectively. The point P is on the H.P. and 20mm in front of the V.P. The front view of the line is inclined at 45° to the reference line. Determine the true length of PQ and its true inclinations with the reference planes. Also, locate the trace.

2. a) A rectangular plane of edges 35mm and 70mm is resting on an edge in the H.P. The surface is inclined to the H.P. such that the top view appears as a square. Draw its projections when the edge resting on the H.P. is perpendicular to the V.P.

   b) A hexagonal plane of side 30mm has a corner on the ground. Its surface is inclined at 45° to the H.P. and the top view of the diagonal through the corner which is in the H.P. makes an angle of 60° with the V.P. Draw its projections.

3. a) A pentagonal prism of base side 30mm and axis 60mm has one of its rectangular faces on the H.P. and the axis inclined at 60° to the V.P. Draw its proejctions.

   b) A square pyramid of base side 40mm and axis 55mm is resting on one of its triangular faces on the H.P. A vertical plane containing the axis is inclined at 45° to the V.P. Draw its projections.

4. a) A square pyramid of base side 40mm and axis 60mm is resting on its base on the H.P. with a side of base parallel to the V.P. Draw its sectional views and true shape of the section, if it is cut by a section plane perpendicular to the V.P. bisecting the axis and is inclined at 45° to the H.P.

   b) A pentagonal pyramid of base side 30mm and axis 60mm is resting on a triangular face on the H.P. with its axis parallel to the V.P. It is cut by a plane whose H.T. is inclined at 30° to the reference line and bisects the axis such that the apex is removed. Draw its sectional front view and obtain true shape of the section.

5. a) Draw the development of lateral surface of a square pyramid of base side 40mm and axis 60mm resting on its base on the H.P., such that a side of the base is parallel to the V.P.

   b) A cone of base diameter 50mm and axis 60mm is resting on its base on the H.P. A section plane perpendicular to V.P. and inclined at 45° to H.P., bisects the axis of the cone. Draw the development of its lateral surface.

6. a) Draw the isometric view of a cylinder of base diameter 50mm and axis 60mm. The axis of the cylinder is perpendicular to the V.P.

   b) The front and top views of an angle plate are shown in figure 1. Draw its isometric view.