H.T.No. | | | | | | | | | | |

Code No: ME1506 **GEC-R14**

I B. Tech I Semester Supplementary Examinations, June 2017

ENGINEERING GRAPHICS-I

(Mechanical Engineering)

Time: 3 Hours **Max. Marks: 60**

Note : Answer Any Five Questions. All questions carry equal marks.

1. a) Inscribe a pentagon in a circle of 65 mm diameter. (5M)
   b) Construct a vernier scale of R.F.= 1/25 and long enough to measure up to 4m. Show 3.14 m and 0.28 m lengths on the scale. (7M)
2. Construct an ellipse when the distance between the focus and the directrix is 70 mm. and the eccentricity is 3/4 . (12M)
3. Draw a hypo-cycloid of a circle of 40 mm diameter, which rolls inside of another circle of 160 mm diameter, for one revolution counter clockwise. Draw a tangent and a normal to it at a point 65 mm from the center of the directing circle. (12M)
4. a) A point P is on VP and 20 mm above HP. Another point Q is also on VP and below HP. The distance between their end projectors is 60 mm. Draw its projections if the line joining P and Q makes an angle of 45^0 with reference line. Also find the position of point Q. (7M)
   b) A 100mm long line AB is parallel to and 20mm in front of VP. End A is 15mm above HP while end B is 55mm above HP. Draw the projections of the line and inclination of the line with HP. (5M)
5. The front view of a line AB measures 60 mm and makes an angle of 45^0 with xy. A is in H.P and V.T of the line is 15mm below X.Y. The line is inclined at 30^0 to V.P. Draw the projections of AB and determine its true length and inclinations with H.P. (12M)
6. A regular hexagonal lamina of 26 mm side has a central hole of 30 mm diameter. Draw the front view and top views when the surface of the lamina is inclined at 45^0 to H.P. A side of lamina is inclined at 35^0 to V.P. (12M)
7. A semi-circular lamina of 64 mm diameter has is straight edges in V.P. and inclined at an angle of 45^0 to H.P. The surface of the lamina makes an angle of 30^0 with V.P. Draw the projections. (12M)
8. A hexagonal lamina of 24 mm side has its surface inclined at 30^0 to H.P. It's one side is parallel to H.P. and inclined at 45^0 to V.P. Draw its projections using auxiliary plane method. (12M)

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