

Code No: R13209

R13**SET - 1****I B. Tech II Semester Supplementary Examinations, April/May - 2017****ENGINEERING DRAWING**

(Com. to CE, ME, TE)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of **Part-A** and **Part-B**
2. Answering the questions in **Part-A** is Compulsory
3. Answer any **THREE** Questions from **Part-B**

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**PART -A**

1. a) Divide a straight line of 120mm into 7 equal parts. (4M)
- b) A line AB 30mm long is perpendicular to V.P. and parallel to H.P. Its end A is 8 mm in front of V.P. and the line is 10mm above H.P. Draw the projections of the line. (4M)
- c) Draw the projections of the following points on the same ground line, keeping the Projectors 25 mm apart. (4M)
  - i) Point A, on the H.P. and 35 mm behind the V.P.
  - ii) Point B, on the H.P. and 25 mm in front of the V.P.
- d) A rectangular plane of sides 50 mm and 25 mm has shorter side on the HP. The surface of the plane is inclined at  $60^\circ$  to the HP and perpendicular to VP. Draw its projections. (6M)
- e) Draw the isometric view of a pentagonal prism, with side of base 25mm and length of axis 50mm, when its axis is horizontal. (4M)

**PART -B**

2. a) Inscribe an ellipse in a parallelogram having sides 150 mm and 100 mm long and an inclined angle of  $120^\circ$  (8M)
- b) Construct a plain scale of RF 1:50000 to show kilometers and hectometers and long enough to measure up to 7 kilometers. Measure a distance of 54 hectometers on your scale. (8M)

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3. a) A point P is 25 mm in front of the V.P. and 40 mm above the H.P. Another point Q is 40 mm in front of the V.P. and 25 mm above the H.P. The distance measured between the projectors is 40mm. Draw the projections and find the distance between P and Q. (8M)
- b) A line CD 80 mm long is inclined at an angle of  $30^\circ$  to H.P. and  $45^\circ$  to V.P. The point C is 20 mm above H.P. and 30mm in front of V.P. Draw the projections of the straight line. (8M)
4. a) A line AB of 100 mm length, is inclined at an angle of  $30^\circ$  to HP and  $45^\circ$  to VP. The point A is 15 mm above HP and 20mm in front of VP. Draw the projections of the line. (8M)
- b) A line of 100 mm long makes an angle of  $35^\circ$  with the HP and  $45^\circ$  with VP. Its midpoint is 20 mm above HP and 15mm in front of VP. Draw the projections of the line. (8M)
5. a) An equilateral triangle of 40mm side is parallel to V.P. perpendicular to H.P. Draw its projections when one of the side is (i) Perpendicular to H.P. (ii) Parallel to H.P. (iii) Inclined  $45^\circ$  to H.P. (8M)
- b) Draw the projections of a circle of 55 mm diameter having the end A of a diameter AB in the H.P., the end B in the V.P., and the surface inclined at  $30^\circ$  to the H.P. and at  $60^\circ$  to the V.P. (8M)
6. a) A square prism, side of base 30 mm and axis 45 mm long lies on H.P. such that its axis is parallel to both H.P. and V.P., Draw the top and front views of the prism when (i) it lies with one of its rectangular faces on H.P. and (ii) it lies with one of its longer edges on H.P. (8M)
- b) Draw the projections of a pentagonal pyramid axis 60 mm long, base 30 mm side having base on the ground and one of edges of base inclined at  $45^\circ$  to V.P. (8M)
- 7 Draw the Front View, Top view and side view of the Figure shown below. All dimensions are in mm. (16M)

