Code No: R161113 **R16** SET - 1

I B. Tech I Semester Supplementary Examinations, May - 2018
ENGINEERING DRAWING
(Com to ECE, EIE, ECom E)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answering the question in **Part-A** is compulsory
3. Answer any **FOUR** Questions from **Part-B**

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PART –A

1. a) Write a caption "KNOWLEDGE IS LIGHT" using BIS standard lettering. (2M)

b) Show the operation of trisecting a right angle. (2M)

c) A point P is 50 mm from both HP and VP. Draw its projections in at least two positions. (2M)

d) A straight line AB 70mm long is in the VP and perpendicular to the HP its one point A is contained by both the planes. Draw its projections. (2M)

e) A pentagonal plane with its side 30mm is perpendicular to the VP and its one side inclined at 45^0 to the VP. Draw its projections. (2M)

f) Draw the projections of a cylinder base 40 mm diameter and axis 60 mm long, with its axis perpendicular to VP and parallel to and 30 mm above HP. (2M)

g) Draw the isometric view of a semi-circle 50 mm diameter when its diameter is vertical. (2M)

PART -B

2. a) Construct a heptagon using general method. (4M)

b) Draw a hypocycloid of a circle of 40 mm diameter which rolls inside another circle of 200 mm diameter for one revolution and also draw a tangent and normal at a point 90 mm from the centre of the base circle. (10M)

3. a) Draw a diagonal scale of R.F=1/75 to show metres, decimeters and centimeters and to measure up to 6 metres. Mark a length of 3.75 metres on it. (6M)

b) A point A is 15mm above HP and 25mm in front of VP. Another point B is 40mm below the HP and 50mm behind the VP. Draw the projections of these points taking the distance between the end projectors as 50mm. Also find the length of the line joining their plans and elevations. (8M)

4. a) The top view of a line GH, 90 mm long measures 65 mm its one end is 25mm above the HP and 30mm in front the VP. (4M)

b) A line AB 70 mm long has its end A at 20 mm above the HP and 25 mm in front of the VP. Its front view and top view measures 50 mm and 60 mm respectively. Draw the projections of the line and determine its inclinations with the HP and the VP. (10M)
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5. a) A thin circular plate of 40mm diameter having its plane vertical and inclined at 45^0 to VP. Its center is 30mm above HP and 35mm in front of VP. Draw the projections. (7M)

   b) Draw the projections of a regular pentagon 40 mm side having its surface inclined at 30^0 to the VP and a side parallel to the VP and inclined at an angle of 60^0 with HP. (7M)

6. a) A square prism of side of its base 40mm and 65mm long axis is resting on its base on the VP and a side of its base makes an angle 45^0. Draw its projections. (7M)

   b) Draw the projections of a cone, base 80 mm diameter and axis 120 mm long, lying on the VP on one of its generators with the axis parallel to the HP. (7M)

7. a) An orthographic top view of an engineering object appears like a regular pentagon of length of its side 40mm. Transform it into a corresponding isometric view. (4M)

   b) Draw the following orthographic views of the object given in figure below. All dimensions are in mm. (10M)
   (i) Front view (ii) Top view