

I B. Tech II Semester Supplementary Examinations, December - 2020**ENGINEERING DRAWING**

(Com. to CE, EEE, Bio-Tech)

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**

PART -A

1. a) Write the following caption as per BIS lettering "GEOMETRY IS THE HEART OF THE ENGINEERING DRAWING". (2M)
- b) Draw an Heptagon of the length of its side 30mm. (2M)
- c) Draw the projections of a point S, 30mm behind the VP and 40mm above the HP. (2M)
- d) Draw the projections of a straight line PQ of length 70mm when it contained by the HP and inclined at 45^0 to the VP. (2M)
- e) Draw the projection of an equilateral triangular plane with the length of its side 40mm when perpendicular to both the planes and one side perpendicular to the HP. (2M)
- f) What is the front view a hexagonal prism of length of its base 30mm when it is standing on the HP with an edge parallel to the VP? (2M)
- g) Draw the isometric scale of projection. And what is an isometric length corresponds to a **ture** length 60mm. (2M)

PART -B

2. a) Construct an ellipse when a pair of conjugate diameters AB and CD are equal to 110mm and 50mm respectively. The angle between the conjugate diameters is 70^0 . (7M)
- b) Construct a diagonal scale of RF =1/6250 to read up to 1 kilometer and to read metres on it. Show a length of 653 metres on it. (7M)
3. a) Draw the projections of the following points on the same ground line, keeping the Projectors 25mm apart. (7M)
 - i) A, in the HP and 20 mm behind the VP.
 - ii) B, 40mm above the HP. and 25mm in front of the VP.
- b) i) A line PQ, 9cm long, is in the HP. and makes an angle of 30^0 with the VP. Its end P is 2.5cm in front of the VP. Draw its projections. (7M)
 ii) The front view of a 7.5cm long line measures 5.5cm. The line is parallel to the HP and one of its end is in the VP and 2.5cm above the HP. Draw the projections of the line and determine its inclination with VP.
4. Line AB, 65mm long, has its end A 20mm above the HP and 25mm in front of the VP. The end B is 40mm above the HP and 65mm in front of the VP. Draw the projections of AB and show its inclinations with the HP and the VP. (14M)

5. a) A pentagonal plate of 35 mm side is perpendicular to VP and parallel to HP. One of its edges is perpendicular to VP. Draw its projections. (7M)
- b) An equilateral triangular lamina of side 30mm is parallel to HP and perpendicular to VP. One of its sides is 20 mm in front of VP and 30 mm above HP. Draw its projections. (7M)
6. A square prism, side of base 30 mm and axis 45 mm long lies on HP, such that its axis is parallel to both HP and VP. Draw the top and front views of the prism when
- it lies with one of its rectangular faces on HP and
 - it lies with one of its longer edges on HP.
- (14M)
7. Draw the isometric view of the orthographic projection given below. All dimensions are in mm. (14M)

