R16

SET - 1

I B. Tech I Semester Supplementary Examinations, November - 2020
ENGINEERING DRAWING
(Com to ECE, EIE, E Com 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) Inscribe a regular Heptagon in a circle of diameter 50mm.   (2M)

    b) Show the operation of bisecting an obtuse angle.   (2M)

    c) Draw the projection of a point G, 40mm above the HP and in the VP.   (2M)

    d) Draw the projections of a straight line PQ; 80mm long on the perpendicular to the   (2M)
        HP and one end is on the VP.

    e) Draw the front view of a square PQRS plane, with its side 40mm contained by the   (2M)
        profile plane (PP) and perfectly standing on the one of its corner.

    f) Draw the orthographic top view of a triangular prism 30mm base side and 60mm   (2M)
        height standing on its base on the VP with two sides of its base equally inclined to
        the HP.

    g) Draw an equivalent isometric view of an orthographic top view of certain object   (2M)
        appears to be a hexagon of 40mm side standing on one of its corner.

PART -B

2. a) The major and minor axes of an ellipse are 120mm and 80mm respectively.   (7M)
        Construct an ellipse by rectangle method.

    b) A rectangular field of 0.54 hectare is represented on a map by a rectangle of   (7M)
        3cm×2cm. Draw the diagonal scale to read up to 1 meter and long enough to
        measure up to 600m. Mark a length of 425m.

3. a) A point A is 15mm above HP and 25mm in front of VP. Another point B is 40mm   (7M)
        below HP and 50mm behind 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.

    b) A straight line AB of 100mm long is perpendicular to the VP and parallel to and   (7M)
        40mm above the HP its highest distant end B measures 120mm from the VP.
        Draw its projections. What is the distance of end A from the VP?

4.   A120mm long line PQ is inclined at 45^0 to the HP and 30^0 to the VP. A point M   (14M)
        on the line is at a distance of 40mm from P and its front view is 50mm above the
        xy line and the top view is 35mm below the xy line. Draw its projection. Locate
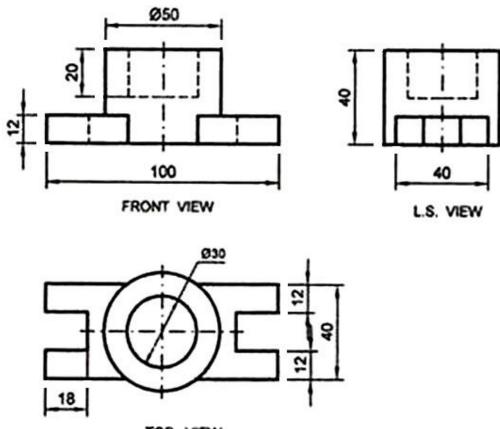   the traces.

5. a) Draw the projections of a circle of 60mm diameter, resting on the VP on a point   (7M)
        on the circumference. The plane is inclined at 45^0 to the VP and perpendicular to
        the HP. The centre of the plane is 40mm above the HP.

    b) A thin circular plate of 40mm diameter having its plane vertical and inclined at 45^0 (7M)
        to VP. Its center is 30mm above HP and 35mm in front of VP. Draw the
        projections.

6. a) A cube of 30mm long edges lies with one of its square faces on HP such that one   (7M)
        of its vertical faces is inclined at 30^0 to VP. Draw its projections.

    b) Draw the projections of a pentagonal pyramid axis 60mm long, base 30mm side   (7M)
        having base on the ground and one of edges of base inclined at 45^0 to VP.

7.   Three views of a machine part are shown in figure. Draw the isometric view of the   (14M)
        part (all dimensions are in mm)

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