(Common to ECE, EEE, EIE, Bio-Tech, EComE, Agri.E)

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B** Answering the question in **Part-A** is Compulsory, Three Questions should be answered from **Part-B** *****

PART-A

1.(a) Draw front view and top view from the following isometric view.



(Note: All dimensions are in mm)

(b) The major and minor axis of an ellipse are 120mm and 80mm. Construct an ellipse using arcs of circles method?

[12+10]

Set No - 1

USHA RAMA COLLEGE OF ENGINEERING & TECHNOLOGY

Subject Code: R13109/R13

PART-B

- 2.(a) Construct a regular heptagon of side 35 mm using general method?
- (b) Draw a vernier scale of R.F = 1/25 to read centimeters upto 4m and on it, show lengths representing 2.39m and 0.91m.?

[4+12]

Set No - 1

- 3.(a) A point P is 50mm from both the reference planes. Draw its projections in all possible positions.
 - (b) A 100mm long line is parallel to and 40mm above the H.P. Its two ends are 25mm and 50mm in front of the V.P. respectively. Draw its projections and find its inclination with the V.P.

[8+8]

4. Draw the projections of line AB, 90mm long, its mind point M being 50mm above the H.P and 40mm in front of the V.P. The end A is 20mm above the H.P and 10mm in front of the V.P. Show the traces and the inclinations of the line with the H.P and the V.P.

[16]

5. Draw the projections of a regular hexagon of 25mm side, having one of its sides in the H.P and inclined at 60 degrees to the V.P, and its surface making an angle of 45 degree with the H.P.

[16]

6. Draw the projections of a pentagonal prism, base 25mm side axis 50mm long, resting on one of its rectangular faces on the H.P, with the axis inclined at 45 degrees to the V.P.?

[16]

7. Draw the isometric view of the following orthographic projections?



(Note: All dimensions are in mm)

(Common to ECE, EEE, EIE, Bio-Tech, EComE, Agri.E)

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B** Answering the question in **Part-A** is Compulsory, Three Questions should be answered from **Part-B** *****

PART-A

1.(a) Draw isometric view from the following orthographic views.



(Note: All dimensions are in mm)

(b) The major and minor axis of an ellipse are 120mm and 80mm. Construct an ellipse using oblong method.

[12+10]

PART-B

2. Construct a diagonal scale of 3:200 showing meters, decimeters and centimeters and to measure up to 6 meters?

[16]

- 3.(a) A point P is 20mm below H.P. and lies in the third quadrant. Its shortest distance from xy is 40mm. Draw its projections?
 - (b) A 90 mm long line is parallel to and 25mm from in front of the V.P. Its one end is in the H.P., while the other is 50mm above the H.P. Draw its projections and find its inclination with the H.P.

[6+10]

Page 1 of 2

Subject Code: R13109/R13

- 4. A line AB of 70mm long, has its ends A 20mm above H.P. and 15mm in front of V.P. The line is inclined at 30 degrees to H.P. and 60 degrees to V.P. Draw its projections.
- 5. A semi-circular plate of 80mm diameter has its straight edge in V.P. and inclined at 45 degrees to the H.P. The surface of the plate makes an angle of 30 degrees with the V.P. Draw its projections.

[16]

[16]

[16]

Set No - 2

- 6. Draw the projections of a hexagonal prism of base 25mm side and axis 60mm long, when it is resting on one of its corners of the base on H.P. The axis of the solid is inclined at 45 degrees to H.P.
- 7. Draw front view, top view and side view from the following isometric view.



(Note: All dimensions are in mm)

(Common to ECE, EEE, EIE, Bio-Tech, EComE, Agri.E)

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B** Answering the question in **Part-A** is Compulsory, Three Questions should be answered from **Part-B** *****

PART-A

1.(a) Draw the isometric projection of the following orthographic views?



(b) A pentagonal pyramid of base 25mm side and axis 60mm long, is resting on an edge of the base. Draw the projections of the pyramid, when its axis is perpendicular to V.P. and the base is at 15mm from V.P.

[11+11]

PART-B

2. Construct a diagonal scale of R.F.=1/32 showing yards, feet and inches and to measure up to 4 yards.

[16]

- 3.(a) A point A is 2.5 cm above the H.P. and 3cm in front of V.P. Draw its projections.
- (b) The top view of a 75mm long line measures 55mm. The line is in the V.P., its one end being 25mm above the H.P. Draw its projections.?

[6+10]

4. A line AB of 90mm long, is inclined at 45 degrees to H.P. and its top view makes an angle of 60 degrees with xy. The end A is on H.P. and 12mm in front of V.P. Draw its projections and find its inclination with V.P.?

[16]

|"|'||||"|"|

Subject Code: R13109/R13

5. Draw the projections of a regular pentagon of 40mm side , having its surface inclined to at 30degrees to the H.P and a side parallel to the H.P. is inclined at an angle of 60 degrees to the V.P.?

[16]

Set No - 3

6. Draw the projections of a cylinder 75mm diameter and 100mm long, lying on the ground with its axis inclined at 30 degrees to the V.P. and parallel to the ground.

[16]

7. Draw front view, top view and side view from the following isometric view.



(Note: All dimensions are in mm)

(Common to ECE, EEE, EIE, Bio-Tech, EComE, Agri.E)

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B** Answering the question in **Part-A** is Compulsory, Three Questions should be answered from **Part-B** *****

PART-A

- 1.(a) Draw the projections of a circle of 60mm diameter, resting on V.P. on a point on the circumference. The plane is inclined at 45 degrees to V.P. and perpendicular to H.P. The center of the plane is 40mm above H.P.
 - (b) Draw the Front view and top view of the following pictorial projection?



[12+10]

PART-B

2. Construct a diagonal scale of R.F.=1/4000 to show meters and long enough to measure up to 500 meters.

[16]

[6+10]

- 3.(a) A point B is 2 cm below the H.P. and 3cm behind the V.P. Draw its projections.
- (b) The front view of a line, inclined at 30 degrees to the V.P. is 65mm long. Draw the projections of the line, when it is parallel to and 40mm above the H.P., its one end being 30mm in front of the V.P.?

Page 1 of 2

|"|"|||||"|"|

Set No - 4

Subject Code: R13109/R13

4. A line AB of 80mm long, has its end A, 15mm from both H.P. and V.P. The other end B is 40mm above H.P. and 50mm in front of V.P. Draw the projections of the line and determine the inclinations of the line with H.P. and V.P.

[16]

Set No - 4

5. Draw the projections of rhombus having diagonals 125mm and 50mm long, the smaller diagonal of which is parallel to both the principle planes, while the other is inclined at 30 degrees to the H.P.

[16]

[16]

- 6. Draw the projections of a cone, base 45mm diameter and axis 50mm long, when it is resting on the ground on a point on its base circle with the axis making an angle of 30 degrees with the H.P. and parallel to V.P.
- 7. Draw isometric view from the following orthographic views.



(Note: All dimensions are in mm)