

Code No: 121AK

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B.Tech I Year Examinations, May - 2018****ENGINEERING DRAWING****(Common to CE, EEE, AE)****Max Marks: 75****Time: 3 hours****Answer all five questions****All questions carry equal marks**

- 1.a) Construct an Ellipse when the distance of focus from the directrix is equal to 60 mm and eccentricity is $\frac{2}{3}$. Draw Tangent and Normal to the curve at a distance of 80 mm from directrix. [12+3]

- b) Divide a Straight line of 70 mm into 11 (eleven) equal parts.

OR

- 2.a) Construct a diagonal scale of RF = $\frac{1}{6250}$ to read upto 1 Kilometer and to read meters on it. Show a distance of 653 meters on it.

- b) Show by means of a drawing that when the diameter of the directing circle is twice that of the generating circle, the Hypocycloid is a straight line. Take the diameter of generating circle is 50 mm. [8+7]

- 3.a) A Rectangle plane of EFGH of size 60 mm \times 30 mm has a corner E on H.P. and 20 mm in-front of V.P. The longer side of rectangle is inclined at 70° to H.P. and parallel to V.P. Draw its projections.

- b) A line CD of 60mm length is inclined at an angle of 30° to H.P. and 45° to V.P. The Point C is 20 mm above H.P. and 15 mm in-front of V.P. and 80 mm from Right profile plane. Draw i) Front View ii) Top view iii) Left side view of the line. [6+9]

OR

- 4.a) A line AB, of 90 mm long, is inclined at 45° to HP and its top view makes an angle of 60° with XY. The end A is on HP and 12 mm in-front of VP. Draw its projections, Traces and find its inclination with VP.

- b) Two points A and B are on HP, the point A being 30 mm in-front of VP while B is 45 mm behind VP. The line joining their top views makes an angle of 45° with XY. Find horizontal distance between the two points. [10+5]

5. A Pentagonal pyramid of base 20 mm and axis 50 mm has its triangular face in the VP with a shorter side inclined to the HP at 30° . Draw its projections [15]

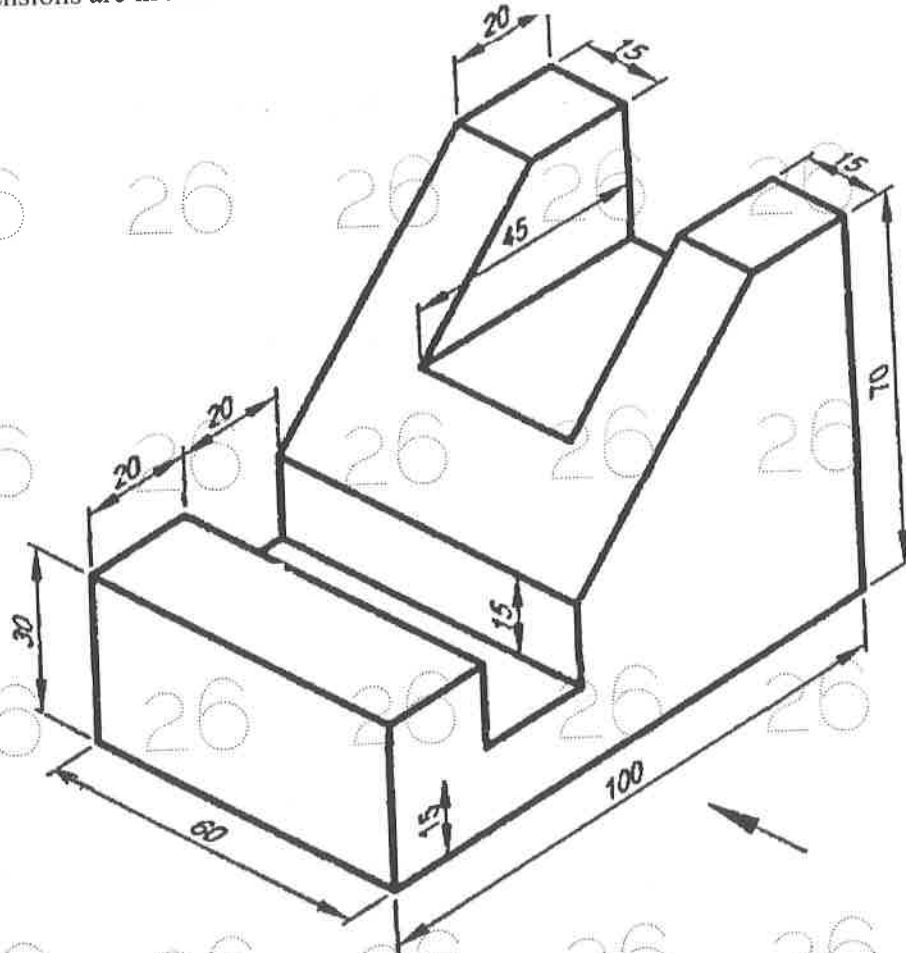
OR

6. A Pentagonal prism of edge of base 30 mm and axis 60 mm long is resting on one of its faces on HP. The axis of the prism is parallel to both HP and VP. It is cut by a section plane, inclined at 45° to HP and passing through the axis 15 mm from one of its base. Draw the projections and show the true shape of the section. [15]

7. Draw the development of a Cylinder of 40 mm diameter and 60 mm height, containing a square hole of 20 mm side. The sides of the hole are equally inclined to the base and the axis of the hole bisects the axis of the cylinder. [15]

OR

9. Draw the Front view, Top view and side view of the object shown in figure. All dimensions are in mm. [15]



OR

- OR
- 10.a) Draw the Perspective view of a vertical circular plane of 50 mm diameter, inclined at 30° to the Picture plane (P.P). The center of the plane is 25 mm behind the P.P. It is resting on a point on the circumference on the ground. The station point is located in the central plane passing through the center of the circular plane and 80 mm in-front of P.P. and 70 mm above the ground.
- b) Draw the Isometric projection of a circular lamina of 60 mm diameter, when its surface is Vertical. [10+5]

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Code No: 121AH

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B.Tech I Year Examinations, May - 2018****ENGINEERING DRAWING****(Common to CSE, MIE, PTM)**

Time: 3 hours

Max Marks: 75

Answer all five questions**All questions carry equal marks**

- 1.a) Construct an Ellipse when the distance of focus from the directrix is equal to 60 mm and eccentricity is $\frac{2}{3}$. Draw Tangent and Normal to the curve at a distance of 80 mm from directrix.

- b) Divide a Straight line of 70 mm into 11 (eleven) equal parts.

[12+3]

OR

- 2.a) Construct a diagonal scale of RF = $\frac{1}{6250}$ to read upto 1 Kilometer and to read meters on it. Show a distance of 653 meters on it.

- b) Show by means of a drawing that when the diameter of the directing circle is twice that of the generating circle, the Hypocycloid is a straight line. Take the diameter of generating circle is 50 mm.

[8+7]

- 3.a) A Rectangle plane of EFGH of size 60 mm \times 30 mm has a corner E on H.P. and 20 mm in-front of V.P. The longer side of rectangle is inclined at 70° to H.P. and parallel to V.P. Draw its projections.

- b) A line CD of 60 mm length is inclined at an angle of 30° to H.P. and 45° to V.P. The Point C is 20 mm above H.P. and 15 mm in-front of V.P. and 80 mm from Right profile plane. Draw i) Front View ii) Top view iii) Left side view of the line.

[6+9]

OR

- 4.a) A line AB, of 90 mm long, is inclined at 45° to HP and its top view makes an angle of 60° with XY. The end A is on HP and 12 mm in-front of VP. Draw its projections, Traces and find its inclination with VP.

- b) Two points A and B are on HP, the point A being 30 mm in-front of VP while B is 45 mm behind VP. The line joining their top views makes an angle of 45° with XY. Find horizontal distance between the two points.

[10+5]

5. A Pentagonal pyramid of base 20 mm and axis 50 mm has its triangular face in the VP with a shorter side inclined to the HP at 30° . Draw its projections

[15]

OR

6. A Pentagonal prism of edge of base 30 mm and axis 60 mm long is resting on one of its faces on HP. The axis of the prism is parallel to both HP and VP. It is cut by a section plane, inclined at 45° to HP and passing through the axis 15 mm from one of its base. Draw the projections and show the true shape of the section.

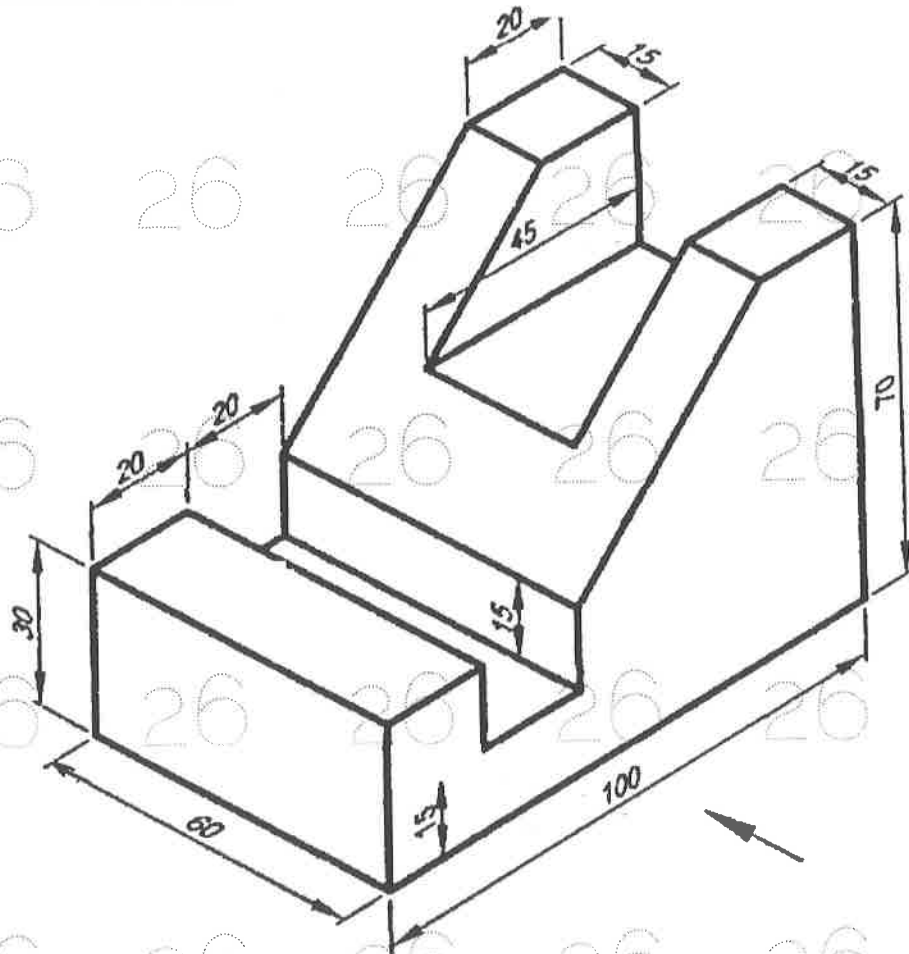
[15]

7. Draw the development of a Cylinder of 40 mm diameter and 60 mm height, containing a square hole of 20 mm side. The sides of the hole are equally inclined to the base and the axis of the hole bisects the axis of the cylinder.

[15]

OR

8. A vertical cylinder of 70 mm diameter is penetrated by a horizontal cylinder of the same size. The axis of the penetrating cylinder is 12 mm away from the axis of the vertical cylinder. Draw the projections of the cylinders and showing the lines (curves) of intersection. [15]
9. Draw the Front view, Top view and side view of the object shown in figure. All dimensions are in mm. [15]



OR

- 10.a) Draw the Perspective view of a vertical circular plane of 50 mm diameter, inclined at 30° to the Picture plane (P.P). The center of the plane is 25 mm behind the P.P. It is resting on a point on the circumference on the ground. The station point is located in the central plane passing through the center of the circular plane and 80 mm in-front of P.P. and 70 mm above the ground. [10+5]
- b) Draw the Isometric projection of a circular lamina of 60 mm diameter, when its surface is Vertical.

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Code No: 111AH

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B.Tech I Year Examinations, May - 2018****ENGINEERING DRAWING****(Common to CSE, MIE, PTM)****Time: 3 hours****Max Marks: 75****Answer all five questions****All questions carry equal marks**

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- b) Divide a Straight line of 70 mm into 11 (eleven) equal parts.

[12+3]**OR**

- 2.a) Construct a diagonal scale of RF = $\frac{1}{6250}$ to read upto 1 Kilometer and to read meters on it. Show a distance of 653 meters on it.

- b) Show by means of a drawing that when the diameter of the directing circle is twice that of the generating circle, the Hypocycloid is a straight line. Take the diameter of generating circle is 50 mm.

[8+7]

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- b) A line CD of 60 mm length is inclined at an angle of 30° to H.P. and 45° to V.P. The Point C is 20 mm above H.P. and 15 mm in-front of V.P. and 80 mm from Right profile plane. Draw i) Front View ii) Top view iii) Left side view of the line.

[6+9]**OR**

- 4.a) A line AB, of 90 mm long, is inclined at 45° to HP and its top view makes an angle of 60° with XY. The end A is on HP and 12 mm in-front of VP. Draw its projections, Traces and find its inclination with VP.

- b) Two points A and B are on HP, the point A being 30 mm in-front of VP while B is 45 mm behind VP. The line joining their top views makes an angle of 45° with XY. Find horizontal distance between the two points.

[10+5]

5. A Pentagonal pyramid of base 20 mm and axis 50 mm has its triangular face in the VP with a shorter side inclined to the HP at 30° . Draw its projections

[15]**OR**

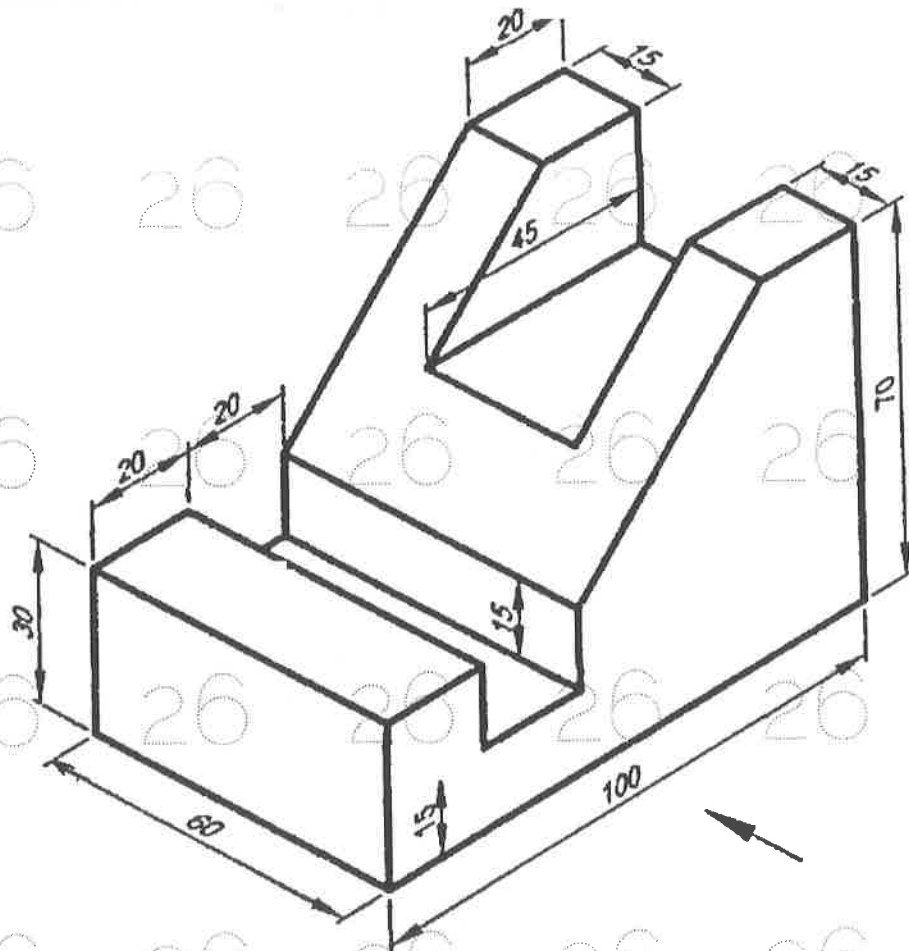
6. A Pentagonal prism of edge of base 30 mm and axis 60 mm long is resting on one of its faces on HP. The axis of the prism is parallel to both HP and VP. It is cut by a section plane, inclined at 45° to HP and passing through the axis 15 mm from one of its base. Draw the projections and show the true shape of the section.

[15]

7. Draw the development of a Cylinder of 40 mm diameter and 60 mm height, containing a square hole of 20 mm side. The sides of the hole are equally inclined to the base and the axis of the hole bisects the axis of the cylinder.

[15]**OR**

8. A vertical cylinder of 70 mm diameter is penetrated by a horizontal cylinder of the same size. The axis of the penetrating cylinder is 12 mm away from the axis of the vertical cylinder. Draw the projections of the cylinders and showing the lines (curves) of intersection. [15]
9. Draw the Front view, Top view and side view of the object shown in figure. All dimensions are in mm. [15]



OR

- 10.a) Draw the Perspective view of a vertical circular plane of 50 mm diameter, inclined at 30° to the Picture plane (P.P). The center of the plane is 25 mm behind the P.P. It is resting on a point on the circumference on the ground. The station point is located in the central plane passing through the center of the circular plane and 80 mm in-front of P.P. and 70 mm above the ground.
- b) Draw the Isometric projection of a circular lamina of 60 mm diameter, when its surface is Vertical. [10+5]

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Code No: 111AK

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B.Tech I Year Examinations, May - 2018****ENGINEERING DRAWING****(Common to CE, EEE, CHEM, AE, AGE)****Time: 3 hours****Max Marks: 75****Answer all five questions****All questions carry equal marks**

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- b) Divide a Straight line of 70 mm into 11 (eleven) equal parts.

[12+3]

OR

- 2.a) Construct a diagonal scale of RF = $\frac{1}{6250}$ to read upto 1 Kilometer and to read meters on it. Show a distance of 653 meters on it.

- b) Show by means of a drawing that when the diameter of the directing circle is twice that of the generating circle, the Hypocycloid is a straight line. Take the diameter of generating circle is 50 mm.

[8+7]

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- b) A line CD of 60 mm length is inclined at an angle of 30° to H.P. and 45° to V.P. The Point C is 20 mm above H.P. and 15 mm in-front of V.P. and 80 mm from Right profile plane. Draw i) Front View ii) Top view iii) Left side-view of the line.

[6+9]

OR

- 4.a) A line AB, of 90 mm long, is inclined at 45° to HP and its top view makes an angle of 60° with XY. The end A is on HP and 12 mm in-front of VP. Draw its projections, Traces and find its inclination with VP.

- b) Two points A and B are on HP, the point A being 30 mm in-front of VP while B is 45 mm behind VP. The line joining their top views makes an angle of 45° with XY. Find horizontal distance between the two points.

[10+5]

5. A Pentagonal pyramid of base 20 mm and axis 50 mm has its triangular face in the VP with a shorter side inclined to the HP at 30° . Draw its projections

[15]

OR

6. A Pentagonal prism of edge of base 30 mm and axis 60 mm long is resting on one of its faces on HP. The axis of the prism is parallel to both HP and VP. It is cut by a section plane, inclined at 45° to HP and passing through the axis 15 mm from one of its base. Draw the projections and show the true shape of the section.

[15]

7. Draw the development of a Cylinder of 40 mm diameter and 60 mm height, containing a square hole of 20 mm side. The sides of the hole are equally inclined to the base and the axis of the hole bisects the axis of the cylinder.

[15]

OR

- [illegible]

OR

- 10.a) Draw the Perspective view of a vertical circular plane of 50 mm diameter, inclined at 30° to the Picture plane (P.P). The center of the plane is 25 mm behind the P.P. It is resting on a point on the circumference on the ground. The station point is located in the central plane passing through the center of the circular plane and 80 mm in-front of P.P. and 70 mm above the ground.
- b) Draw the Isometric projection of a circular lamina of 60 mm diameter, when its surface is Vertical. [10+5]

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R09

Code No: 51012

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech I Year Examinations, May - 2018

ENGINEERING DRAWING
(Common to ME, MMT)

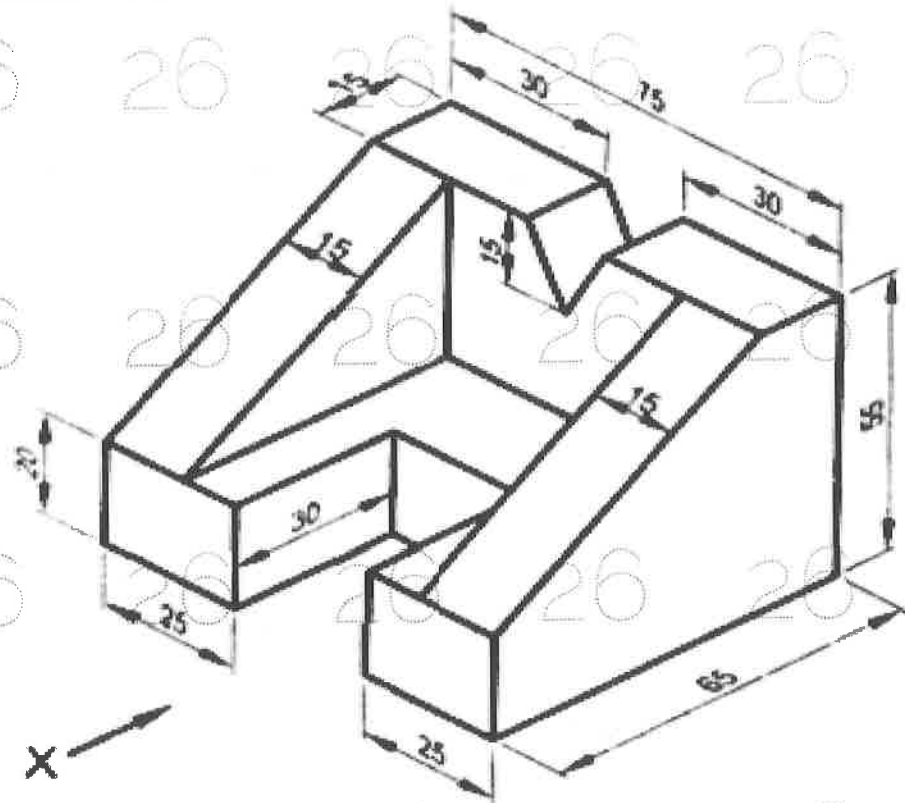
Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

- 1.a) The distance between two points on a map is 5 cm. The real distance between them is 20 meters. Draw a diagonal scale to measure up to 60 m and show a distance of 43.6 m on it.
- b) Draw an epicycloid generated by a point on the circumference of a circle of diameter 50 mm which rolls outside another circle of diameter 150 mm, for one revolution. Also, draw a tangent and a normal to the curve, at a point 115 mm from the centre of the directing circle. [7+8]
2. A line PQ inclined at 30° to the V.P. has the end P 15 mm above the H.P. Its front view measures 70 mm and is inclined at 45° to reference line. The V.T. of the line is 25 mm below the H.P. Draw the projections of the line PQ and determine its true length and the H.T. [15]
3. An isosceles triangular plane ABC of base 60 mm and altitude 50 mm has its base in the H.P. and inclined at 30° to the V.P. The corners A and C are in the V.P. Draw its projections and determine the inclination of the plane with the H.P. [15]
4. A hexagonal pyramid of base side 30 mm and axis 60 mm, has an edge of its base on the ground inclined at 45° to the V.P. and the axis is inclined at 30° to the H.P. Draw its projections. [15]
5. A cylinder of base diameter 70 mm is resting on its base on the H.P. It is penetrated by another cylinder of base diameter 60 mm, such that their axes intersect each other at right angles. Draw the projections of the combinations and show the curves of intersection. [15]
6. A square pyramid of base side 25 mm and axis 40 mm rests centrally over a cylindrical block of base diameter 50 mm and thickness 20 mm. Draw the isometric projection of the arrangement. [15]
7. A square plane of side 50 mm lies on the GP with an edge parallel to and 20 mm behind the PP. The station point is 60 mm in front of PP, 65 mm above GP and lies in a CP which is 55 mm towards right of the centre of the square plane. Draw its perspective view. [15]

8. Draw front view, top view and right side view of the object shown in figure. All dimensions are in mm. [15]



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Code No: 51013

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B.Tech I Year Examinations, May - 2018****ENGINEERING DRAWING****(Electronics and Communication Engineering)**

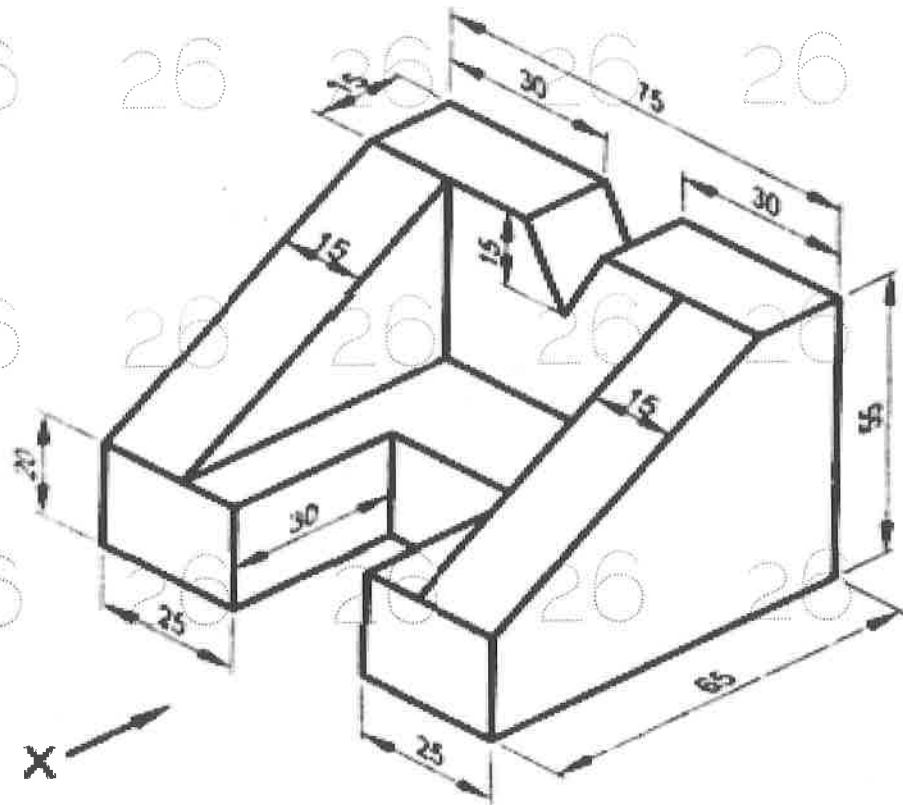
Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

- 1.a) The distance between two points on a map is 5 cm. The real distance between them is 20 meters. Draw a diagonal scale to measure up to 60 m and show a distance of 43.6 m on it.
- b) Draw an epicycloid generated by a point on the circumference of a circle of diameter 50 mm which rolls outside another circle of diameter 150 mm, for one revolution. Also, draw a tangent and a normal to the curve, at a point 115 mm from the centre of the directing circle. [7+8]
2. A line PQ inclined at 30° to the V.P. has the end P 15 mm above the H.P. Its front view measures 70 mm and is inclined at 45° to reference line. The V.T. of the line is 25 mm below the H.P. Draw the projections of the line PQ and determine its true length and the H.T. [15]
3. An isosceles triangular plane ABC of base 60 mm and altitude 50 mm has its base in the H.P. and inclined at 30° to the V.P. The corners A and C are in the V.P. Draw its projections and determine the inclination of the plane with the H.P. [15]
4. A hexagonal pyramid of base side 30 mm and axis 60 mm, has an edge of its base on the ground inclined at 45° to the V.P. and the axis is inclined at 30° to the H.P. Draw its projections. [15]
5. A cylinder of base diameter 70 mm is resting on its base on the H.P. It is penetrated by another cylinder of base diameter 60 mm, such that their axes intersect each other at right angles. Draw the projections of the combinations and show the curves of intersection. [15]
6. A square pyramid of base side 25 mm and axis 40 mm rests centrally over a cylindrical block of base diameter 50 mm and thickness 20 mm. Draw the isometric projection of the arrangement. [15]
7. A square plane of side 50 mm lies on the GP with an edge parallel to and 20 mm behind the PP. The station point is 60 mm in front of PP, 65 mm above GP and lies in a CP which is 55 mm towards right of the centre of the square plane. Draw its perspective view. [15]

8. Draw front view, top view and right side view of the object shown in figure. All dimensions are in mm. [15]



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R09

Code No: 51015

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech I Year Examinations, May - 2018

ENGINEERING DRAWING

(Common to IT, AME)

Time: 3 hours

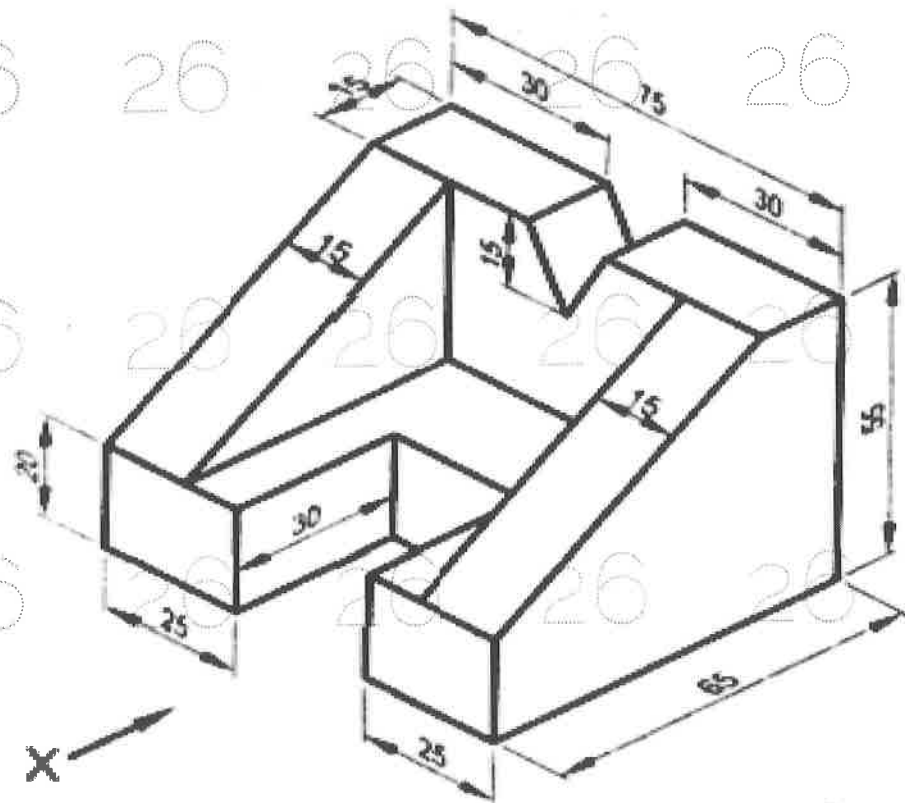
Max. Marks: 75

Answer any five questions

All questions carry equal marks

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8. Draw front view, top view and right side view of the object shown in figure. All dimensions are in mm. [15]



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