Code No: 111AH

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year Examinations, December - 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) A point on the hyperbola is 60 mm from one of the asymptote and 30 mm from the second asymptote. Draw the curve if the angle between them is 120^0.

b) Construct a diagonal scale of 1:25 to read meters, decimeters and centimeters and long enough to measure 4 m. Mark on it a distance of 2.47 m. [7+8]

OR

2.a) A disc, radius 30 mm is rolling on the outside surface of a curved surface of radius 90 mm. Draw the path traced by a point on the circumference of the disc. The point is initially in touch with the base circle. Name the curve. Also draw a tangent and normal at a distance of 125 mm from the center of the base circle.

b) Draw an involute of a pentagon of side 30 mm. Draw a tangent and normal to the curve at a distance of 120 mm from the center of the pentagon. [9+6]

3.a) A point L is lying in the first quadrant. The shortest distance of the point from XY line is 55 mm. If the point is 30 mm above H.P. Draw its projections and also find the distance to the point from V.P.

b) A line AB of 75 mm long is making an angle of 55^0 with XY line in the front view and length of the top view is 55 mm. End A is 15 mm above H.P. and 10 mm in front of V.P. Draw the projections of the line and its inclinations with H.P. and V.P. [5+10]

OR

4.a) A line AB 50 mm long is parallel to VP and inclined at 35^0 with H.P. Point A is 20 mm above H.P. and 40 mm in front of V.P. Draw the projections of the line.

b) A plate having shape of an isosceles triangle has base 50 mm long and altitude 70 mm. It is so placed that in the front view it is seen as an equilateral triangle of 50 mm sides one side inclined at 45^0 to XY. Draw its top view. [5+10]

5. A hexagonal prism of base 30 mm and axis 70 mm long has an edge of the base in on V.P. Draw the projections, if the rectangular face containing that edge makes an angle of 45^0 with V.P. [15]

OR

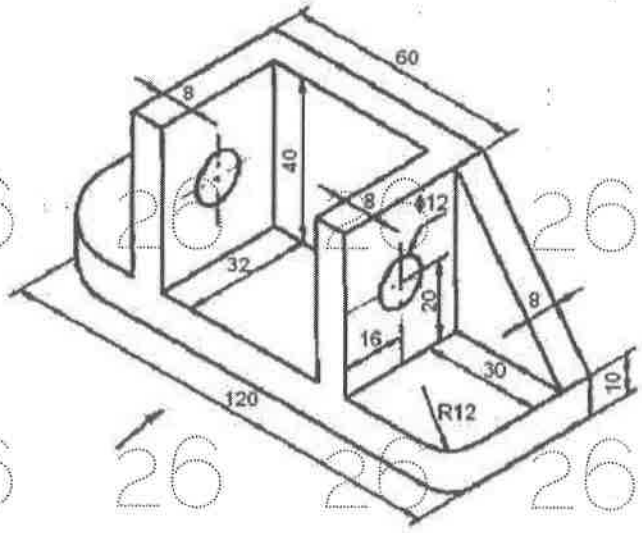
6. A pentagonal pyramid of base 30 mm and 60 mm long axis is laying on one of its face is on H.P. It is cut by a cutting plane perpendicular to V.P. and inclined at 60^0 to H.P. The cutting plane is passing through the opposite corner of the base. Draw the sectional top view and true shape of section. [15]

7. A cone of height 60 mm and base diameter of 50 mm is resting on its base. A semicircular hole diameter 26 mm is drilled such that the axis of the hole is perpendicular to the V.P. and intersecting the axis of the cone at a height of 20 mm above H.P. Develop the lateral surface of the cone if the top surface of the hole is flat. [15]

OR

8. A cylinder with a 60 mm base diameter and height 80 mm long is resting on its base on H.P. It is penetrated by another cylinder of 50 mm base diameter and height 90 mm long, such that their axes intersect each other at right angles. Draw the projections of the combination and show the curves of intersection. [15]

9. Draw the orthographic projections of the following figure. All dimensions are in mm. [15]



OR

10. A pentagonal plane of 40 mm side is parallel to and 15 mm above the GP. The corner which is nearest to PP is 15 mm behind it and an edge containing that corner is making an angle 45^0 with PP. The station point is 40 mm in front of the PP, 50 mm above the GP and lies in central plane which is at a distance of 70 mm left to the corner nearest to the PP. Draw the perspective view of the plane. [15]

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Code No: 51013 **R09**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B .Tech I Year Examinations, December - 2018

ENGINEERING DRAWING

(Electronics and Communication Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any five questions

All questions carry equal marks

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1. An area of 144 sq.cm on a map represents an area of 36 sq.km on a field. Find the scale factor for this map and construct a relevant scale and mark a distance of 7.56 km on it. [15]

2. The end A of a line AB is in the H.P and 25 mm behind the V.P. The B is in the V.P and 50 mm above the H.P. The distance between the end projectors is 75 mm. Draw the projections of AB and determine its true length and inclinations with the two planes. [15]

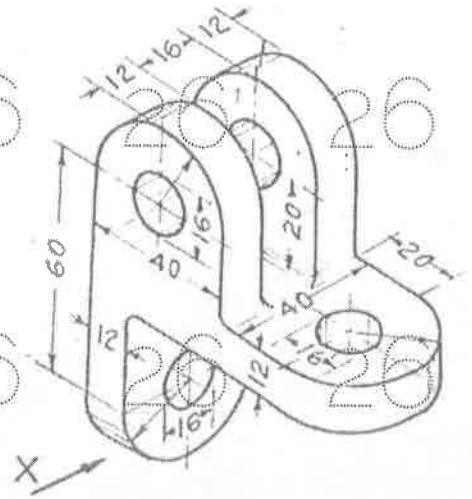
3. Draw the projections of a regular hexagon of 40 mm side, having one of its sides on the ground and inclined at 60^0 to VP and its surface making an angle of 30^0 with the ground. [15]

4. A pentagonal pyramid, side of base 35 mm and height 60 mm rests with its base on H.P and an edge of its base is parallel to V.P. A section plane perpendicular to V.P and inclined at 45^0 to H.P passes through the axis at a point 40mm above the base. Draw the sectional top view. [15]

5. A cylinder of diameter 40 mm penetrates into a cylinder of diameter 60 mm. Their axes intersect each other at an angle of 60^0. Draw the front and top views of the solids showing the curves intersection. [15]

6. Draw the isometric view of a pentagonal pyramid with side of base 25 and axis 60 long. The pyramid is resting on its base on H.P, with an edge of the base (away from the observer) parallel to V.P. [15]

7. For the isometric view shown below,
Draw
a) Front view
b) Top view and
c) Left side view
(All dimensions are in mm) [15]



8. A rectangular prism with a base of 20 mm × 40 mm and the axis of 50 mm is resting on its base on the GP with its side faces equally inclined to the PPP and one vertical edge touching the PPP. The longer base edge is on the right and the station point is 50 mm in front of the PPP and 65 mm above the GP, the central plane is 10 mm on the left of the axis of the prism. Draw a perspective view of the prism using the vanishing point method. [15]

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Code No: 51012

R09

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B .Tech I Year Examinations, December - 2018
ENGINEERING DRAWING
(Common to ME, MMT)

Time: 3 hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks

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1. An area of 144 sq.cm on a map represents an area of 36 sq.km on a field. Find the scale factor for this map and construct a relevant scale and mark a distance of 7.56 km on it. [15]

2. The end A of a line AB is in the H.P and 25 mm behind the V.P. The B is in the V.P and 50 mm above the H.P. The distance between the end projectors is 75 mm. Draw the projections of AB and determine its true length and inclinations with the two planes. [15]

3. Draw the projections of a regular hexagon of 40 mm side, having one of its sides on the ground and inclined at 60^0 to VP and its surface making an angle of 30^0 with the ground. [15]

4. A pentagonal pyramid, side of base 35 mm and height 60 mm rests with its base on H.P and an edge of its base is parallel to V.P. A section plane perpendicular to V.P and inclined at 45^0 to H.P passes through the axis at a point 40mm above the base. Draw the sectional top view. [15]

5. A cylinder of diameter 40 mm penetrates into a cylinder of diameter 60 mm. Their axes intersect each other at an angle of 60^0. Draw the front and top views of the solids showing the curves intersection. [15]

6. Draw the isometric view of a pentagonal pyramid with side of base 25 and axis 60 long. The pyramid is resting on its base on H.P, with an edge of the base (away from the observer) parallel to V.P. [15]

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Draw
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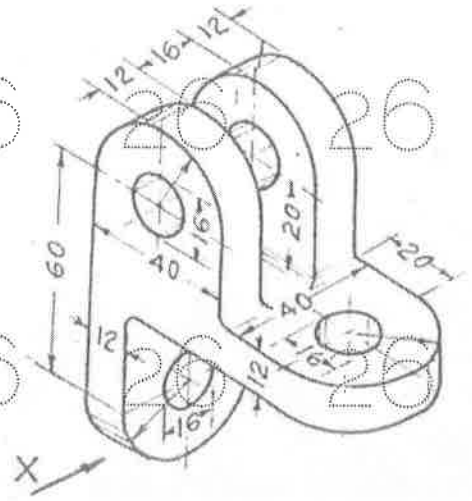
b) Top view and
c) Left side view
(All dimensions are in mm) [15]



8. A rectangular prism with a base of 20 mm × 40 mm and the axis of 50 mm is resting on its base on the GP with its side faces equally inclined to the PPP and one vertical edge touching the PPP. The longer base edge is on the right and the station point is 50 mm in front of the PPP and 65 mm above the GP, the central plane is 10 mm on the left of the axis of the prism. Draw a perspective view of the prism using the vanishing point method. [15]

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Code No: 111AK

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year Examinations, December - 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

1.a) A point on the hyperbola is 60 mm from one of the asymptote and 30 mm from the second asymptote. Draw the curve if the angle between them is 120^0.

b) Construct a diagonal scale of 1:25 to read meters, decimeters and centimeters and long enough to measure 4 m. Mark on it a distance of 2.47 m. [7+8]

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b) A line AB of 75 mm long is making an angle of 55^0 with XY line in the front view and length of the top view is 55 mm. End A is 15 mm above H.P. and 10 mm in front of V.P. Draw the projections of the line and its inclinations with H.P. and V.P. [5+10]

OR

4.a) A line AB 50 mm long is parallel to VP and inclined at 35^0 with H.P. Point A is 20 mm above H.P. and 40 mm in front of V.P. Draw the projections of the line.

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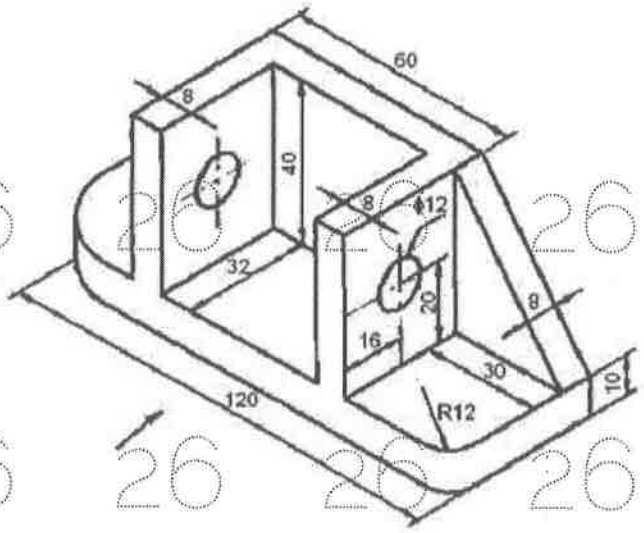

OR

10. A pentagonal plane of 40 mm side is parallel to and 15 mm above the GP. The corner which is nearest to PP is 15 mm behind it and an edge containing that corner is making an angle 45^0 with PP. The station point is 40 mm in front of the PP, 50 mm above the GP and lies in central plane which is at a distance of 70 mm left to the corner nearest to the PP. Draw the perspective view of the plane. [15]

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R09

Code No: 51015

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B .Tech I Year Examinations, December - 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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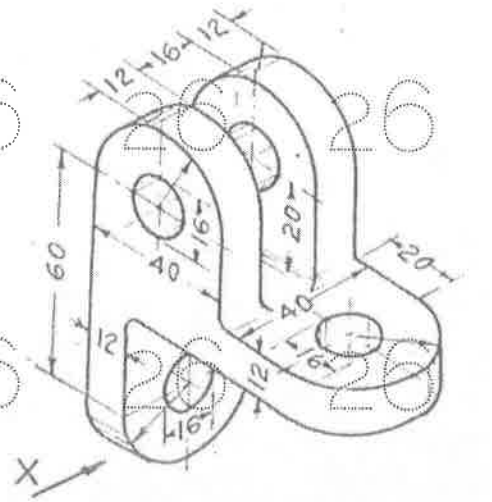

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