www.firstranker.com

Code No: R07A10191 **R07** **Set No. 2**

**I B.Tech Examinations,June 2011**
**ENGINEERING GRAPHICS**
**Common to CE, ME, CHEM, MECT, MEP, AE, AME, MMT**
**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

⋆ ⋆ ⋆ ⋆ ⋆

1. A vertical cylinder of 60 mm diameter, is penetrated by a horizontal square prism of 35 mm side. The axes of the two solids intersect each other. A rectangular face of the prism is inclined at $60^o$ to V.P. Draw the lines of intersection. [16]

2. A vertical cylinder of base diameter 30 mm and axis 45 mm long is sectioned such that its front view appears as isosceles triangle of 30 mm and height 45 mm. Develop its surface. [16]

3. Draw the following views of the object given in figure 7. All dimensions are in mm.
   (a) Front View
   (b) Top View and
   (c) Side View. [16]

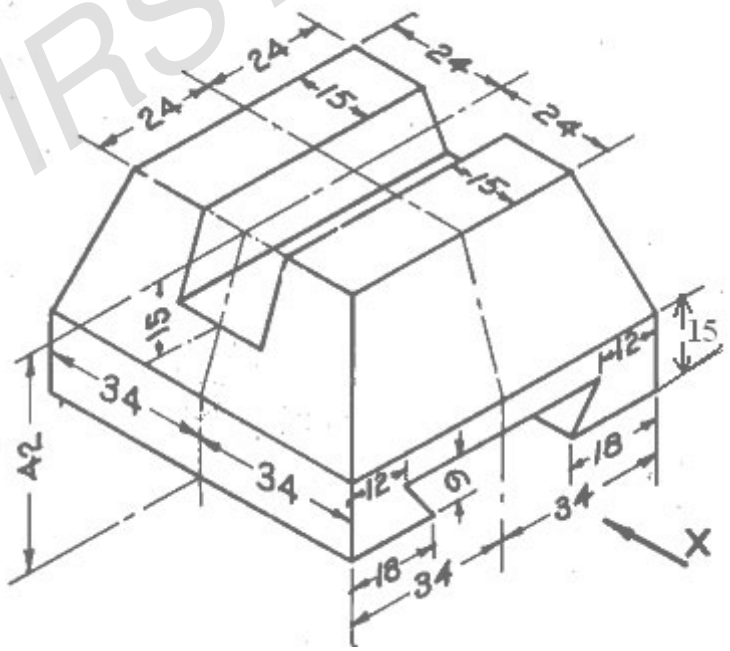


Figure 7

4. A line PQ 65 mm long has its end P in both HP and VP. It is inclined at an angle of $30^0$ to HP and $45^0$ to the VP. Draw the projections and locate its traces. [16]

5. Draw the perspective view of a straight line AB, 55 mm long is parallel to and 15 mm above the ground plane and inclined at $40^0$ to Picture Plane. The end A is 20



www.firstranker.com

www.firstranker.com



mm behind the picture plane. The station point is 30 mm, 35 mm in front of the picture plane and 45 mm above the ground plane and lies in central plane passing through the mid point of AB. [16]

6. An ideal gas undergoes an isothermal expansion (i.e. the product of pressure P and volume V is constant) from 5 kN/cm$^2$ to 60 kN/cm$^2$. One of the states of the gas is described by P = 25 kN/cm$^2$ and V = 0.1 m$^3$. Draw the curve. [16]

7. Draw the isometric view of the object whose orthographic projections are given in figure 8. All dimensions are in mm. [16]

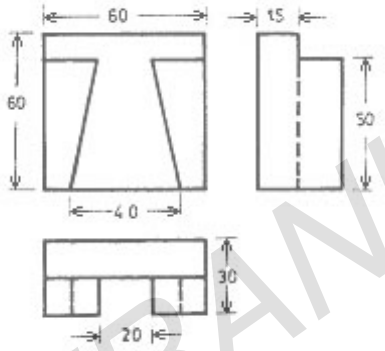


Figure 8

8. A regular pentagon of side 40 mm has its surface inclined to HP at 45$^0$. It is resting with its base on HP and the line joining the vertex to mid-point of the base making an angle of 60$^0$ with VP. Draw its projections. [16]

⋆ ⋆ ⋆ ⋆ ⋆

FIRSTRANKER



www.firstranker.com

www.firstranker.com

Code No: R07A10191 **R07** **Set No. 4**

**I B.Tech Examinations,June 2011**
**ENGINEERING GRAPHICS**
**Common to CE, ME, CHEM, MECT, MEP, AE, AME, MMT**
**Time: 3 hours** **Max Marks: 80**
**Answer any FIVE Questions**
**All Questions carry equal marks**
⋆ ⋆ ⋆ ⋆ ⋆

1. Draw the perspective view of a straight line AB, 55 mm long is parallel to and 15 mm above the ground plane and inclined at $40^0$ to Picture Plane. The end A is 20 mm behind the picture plane. The station point is 30 mm, 35 mm in front of the picture plane and 45 mm above the ground plane and lies in central plane passing through the mid point of AB. [16]

2. Draw the following views of the object given in figure 7. All dimensions are in mm.
   (a) Front View
   (b) Top View and
   (c) Side View. [16]

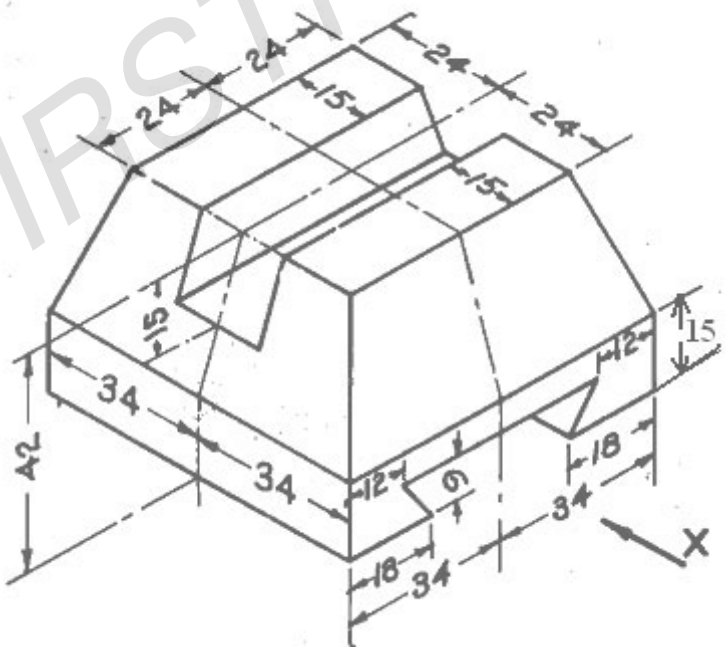


Figure 7

3. A vertical cylinder of 60 mm diameter, is penetrated by a horizontal square prism of 35 mm side. The axes of the two solids intersect each other. A rectangular face of the prism is inclined at $60^o$ to V.P. Draw the lines of intersection. [16]

4. A regular pentagon of side 40 mm has its surface inclined to HP at $45^0$. It is resting with its base on HP and the line joining the vertex to mid-point of the base making an angle of $60^0$ with VP. Draw its projections. [16]



www.firstranker.com

www.firstranker.com

Code No: R07A10191 **R07** **Set No. 4**

5. A line PQ 65 mm long has its end P in both HP and VP. It is inclined at an angle of $30^0$ to HP and $45^0$ to the VP. Draw the projections and locate its traces. [16]

6. A vertical cylinder of base diameter 30 mm and axis 45 mm long is sectioned such that its front view appears as isosceles triangle of 30 mm and height 45 mm. Develop its surface. [16]

7. Draw the isometric view of the object whose orthographic projections are given in figure 8. All dimensions are in mm. [16]

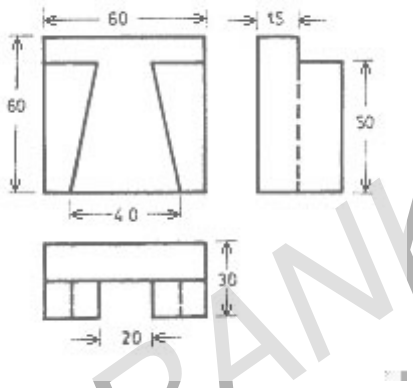


Figure 8

8. An ideal gas undergoes an isothermal expansion (i.e. the product of pressure P and volume V is constant) from 5 kN/cm$^2$ to 60 kN/cm$^2$. One of the states of the gas is described by P = 25 kN/cm$^2$ and V = 0.1 m$^3$. Draw the curve. [16]

⋆ ⋆ ⋆ ⋆ ⋆

FIRSTRANKER



www.firstranker.com

www.firstranker.com

Code No: R07A10191 **R07** **Set No. 1**

**I B.Tech Examinations,June 2011**
**ENGINEERING GRAPHICS**
**Common to CE, ME, CHEM, MECT, MEP, AE, AME, MMT**
**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

⋆ ⋆ ⋆ ⋆ ⋆

1. A regular pentagon of side 40 mm has its surface inclined to HP at $45^0$. It is resting with its base on HP and the line joining the vertex to mid-point of the base making an angle of $60^0$ with VP. Draw its projections. [16]

2. A vertical cylinder of 60 mm diameter, is penetrated by a horizontal square prism of 35 mm side. The axes of the two solids intersect each other. A rectangular face of the prism is inclined at $60^o$ to V.P. Draw the lines of intersection. [16]

3. Draw the perspective view of a straight line AB, 55 mm long is parallel to and 15 mm above the ground plane and inclined at $40^0$ to Picture Plane. The end A is 20 mm behind the picture plane. The station point is 30 mm, 35 mm in front of the picture plane and 45 mm above the ground plane and lies in central plane passing through the mid point of AB. [16]

4. Draw the following views of the object given in figure 7. All dimensions are in mm.
   (a) Front View
   (b) Top View and
   (c) Side View. [16]

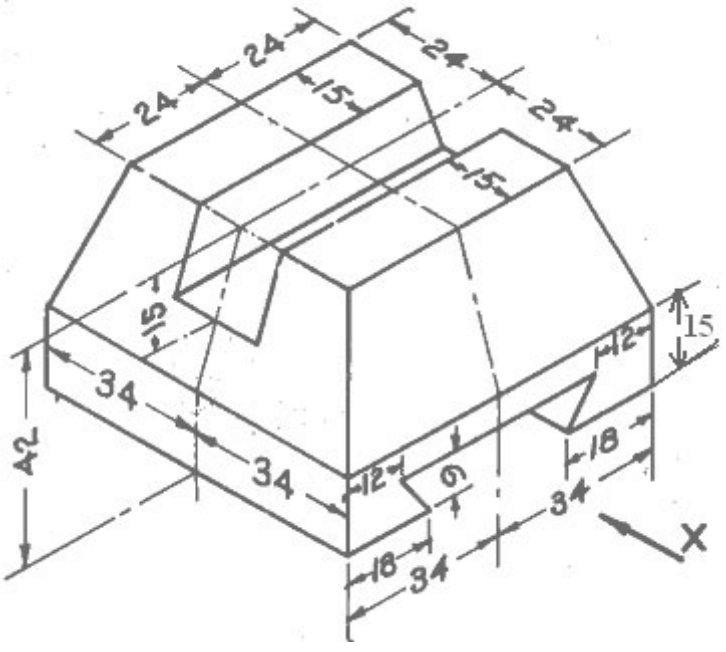


Figure 7

FIRSTRANKER



www.firstranker.com

www.firstranker.com

Code No: R07A10191 **R07** **Set No. 1**

5. A line PQ 65 mm long has its end P in both HP and VP. It is inclined at an angle of $30^0$ to HP and $45^0$ to the VP. Draw the projections and locate its traces. [16]

6. An ideal gas undergoes an isothermal expansion (i.e. the product of pressure P and volume V is constant) from 5 kN/cm$^2$ to 60 kN/cm$^2$. One of the states of the gas is described by P = 25 kN/cm$^2$ and V = 0.1 m$^3$. Draw the curve. [16]

7. Draw the isometric view of the object whose orthographic projections are given in figure 8. All dimensions are in mm. [16]

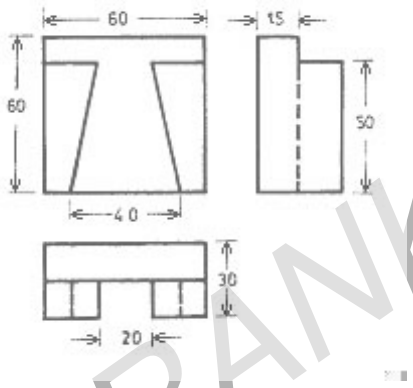


Figure 8

8. A vertical cylinder of base diameter 30 mm and axis 45 mm long is sectioned such that its front view appears as isosceles triangle of 30 mm and height 45 mm. Develop its surface. [16]

⋆ ⋆ ⋆ ⋆ ⋆

FIRSTRANKER



www.firstranker.com

www.firstranker.com

Code No: R07A10191 **R07** **Set No. 3**

**I B.Tech Examinations,June 2011**
**ENGINEERING GRAPHICS**
**Common to CE, ME, CHEM, MECT, MEP, AE, AME, MMT**
**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

⋆ ⋆ ⋆ ⋆ ⋆

1. An ideal gas undergoes an isothermal expansion (i.e. the product of pressure P and volume V is constant) from 5 kN/cm$^2$ to 60 kN/cm$^2$. One of the states of the gas is described by P = 25 kN/cm$^2$ and V = 0.1 m$^3$. Draw the curve. [16]

2. A line PQ 65 mm long has its end P in both HP and VP. It is inclined at an angle of $30^0$ to HP and $45^0$ to the VP. Draw the projections and locate its traces. [16]

3. A regular pentagon of side 40 mm has its surface inclined to HP at $45^0$. It is resting with its base on HP and the line joining the vertex to mid-point of the base making an angle of $60^0$ with VP. Draw its projections. [16]

4. A vertical cylinder of base diameter 30 mm and axis 45 mm long is sectioned such that its front view appears as isosceles triangle of 30 mm and height 45 mm. Develop its surface. [16]

5. A vertical cylinder of 60 mm diameter, is penetrated by a horizontal square prism of 35 mm side. The axes of the two solids intersect each other. A rectangular face of the prism is inclined at $60^o$ to V.P. Draw the lines of intersection. [16]

6. Draw the perspective view of a straight line AB, 55 mm long is parallel to and 15 mm above the ground plane and inclined at $40^0$ to Picture Plane. The end A is 20 mm behind the picture plane. The station point is 30 mm, 35 mm in front of the picture plane and 45 mm above the ground plane and lies in central plane passing through the mid point of AB. [16]

7. Draw the following views of the object given in figure 7. All dimensions are in mm.
   (a) Front View
   (b) Top View and
   (c) Side View. [16]

FIRSTRANKER



www.firstranker.com

www.firstranker.com

Code No: R07A10191 **R07** **Set No. 3**

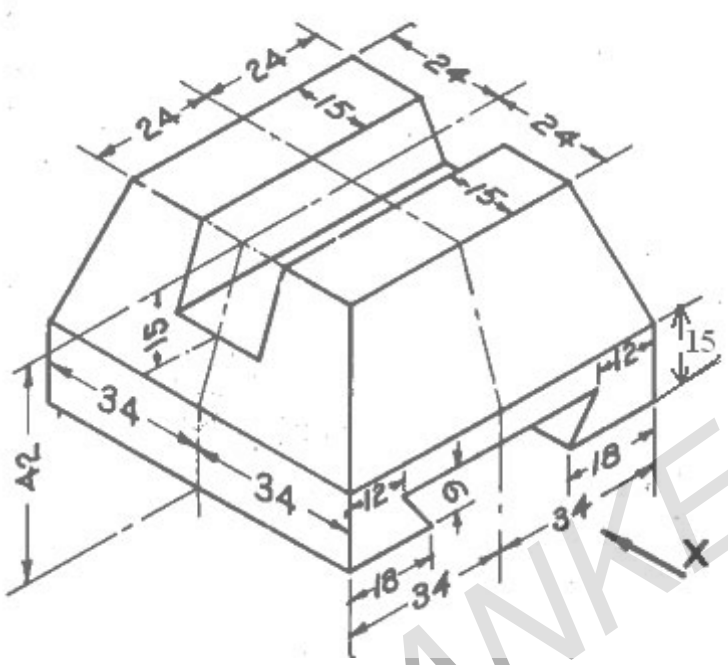


Figure 7

8. Draw the isometric view of the object whose orthographic projections are given in figure 8. All dimensions are in mm. [16]

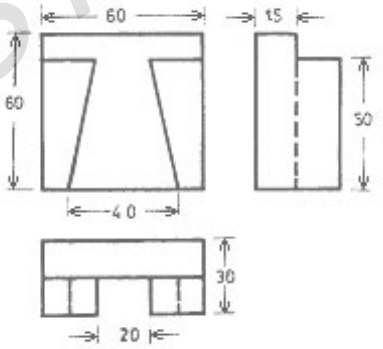


Figure 8

⋆ ⋆ ⋆ ⋆ ⋆

FIRSTRANKER



www.firstranker.com