Code.No: 09A10291 | R09 | SET-1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
I B.TECH - REGULAR EXAMINATIONS JUNE - 2010
ENGINEERING DRAWING
(COMMON TO EEE, EIE, ECC)

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

Answer any FIVE questions
All questions carry equal marks

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1(a) Draw a scale of 10 centimeters = 3 decameters to show decameters and meters. Show the lengths of 33 meters and 11 meters on it.

(b) Draw an ellipse by focus-directrix method when the distance of the focus from the directrix is equal to 60 mm and the eccentricity is 2/3. [15]

2. A 90 mm long line PQ is inclined at 45^0 to the H.P and 30^0 to the V.P. Its end P is in the H.P. and 40 mm in front of the V.P. Draw its projections keeping the end Q in the fourth quadrant. [15]

3. A pentagonal pyramid, having a base with a 30 mm side and a 70 mm long axis, has one of the corners on the ground with its axis inclined at 45^0 to the H.P. A vertical plane containing the axis and that corner is inclined at 30^0 to the V.P. Draw its projections. [15]

4. A square prism has its shorter edge in the VP. Its axis is parallel to the HP and is inclined at 50° to the VP. The prism is cut by an AIP inclined at 45° to the HP and passing through the midpoint of the axis. Draw the Front View, Sectional Top View, and Side View. The base side of the prism is 40 mm and its length of axis is 80 mm. [15]

5. A triangular prism, having base with a 60 mm side and a 100 mm long axis, is resting on its base on the H.P. with a nearer face parallel to the V.P. It is penetrated by a cylinder with a 50 mm diameter and a 90 mm long axis. The axis of the cylinder is parallel to both the reference planes, and 15 mm away from the axis of the prism towards the observer. Draw the projections of the combination and show the curves of intersection. [15]

6. Draw an isometric view of a pentagonal prism having a base with 30 mm side and 60 mm long axis, resting on its base in H.P. with a face parallel and nearer to the V.P. [15]

7. Draw the front view, top view and side view of the object whose isometric view is shown in the Figure 1 below (All dimensions are in mm). [15]

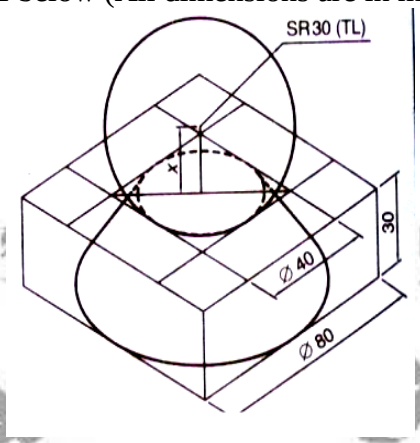

Figure 1

8. Draw a perspective view of a square plane with a 60 mm side resting on the GP with one of its corners touching PP, and a side right to the corner inclined at 30^0 to it. The station point is 50 mm in front of PP, and 60 mm above GP, and lies in a CP which is 40 mm towards right of the corner touching the PP. [15]

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Code.No: 09A10291 | R09 | SET-2

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
I B.TECH – REGULAR EXAMINATIONS JUNE - 2010
ENGINEERING DRAWING
(COMMON TO EEE, EIE, ECC)

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

Answer any FIVE questions
All questions carry equal marks

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1(a) Draw a Vernier scale of RF =1/5 to read decimeters, centimeters and millimeters, and to measure up to 6 decimeters. Show the lengths of 5.73 dm, 2.99 dm and 0.49 dm on it.

(b) In a triangle ABC, AB, AC, and BC are 100 mm, 55 mm and 70 mm respectively. Draw an ellipse and that A and B are foci, and C is a point on the curve. Find directrix and eccentricity of ellipse. [15]

2. The end point C of an 80 mm long line CD is 15 mm above the H.P. and 10 mm in front of the V.P. The line is inclined at 30^0 to the H.P. and 45^0 to the V.P., and the other end point D lies in the second quadrant. Draw its projections and determine its traces. [15]

3. A pentagonal plane with a 35 mm side is resting on one of its edges in the H.P. with its surface perpendicular to the V.P. The corner opposite to the edge on which it is resting is 40 mm above the H.P. draw its projections. Also, project another front view on an A.V.P. which is inclined at 45^0 with the V.P. [15]

4. A pentagonal prism having a base with 30 mm side and 65 mm long axis, is resting on its base in the H.P. with a rectangular face parallel to the V.P. It is cut by a section plane perpendicular to the V.P., inclined at 30^0 with the H.P., and passing through a point on the axis, 25 mm from one of the bases. Draw the development of its lateral surface. [15]

5. A cylinder resting on its base on the H.P. is penetrated by another cylinder with their axes bisecting at right angles. Draw the projections of the combination and show the curves of intersection. Consider the vertical cylinder having a 60 mm base diameter while the penetrating cylinder has a 50 mm diameter. [15]

6. Draw an isometric projection of a frustum of the pentagonal pyramid with a 40 mm base side, 20 mm top side, and 35 mm height resting on its base in the H.P. [15]

7. Draw the front view, top view and side view of the object whose isometric view is shown in the Figure 2 below (All dimensions are in mm). [15]

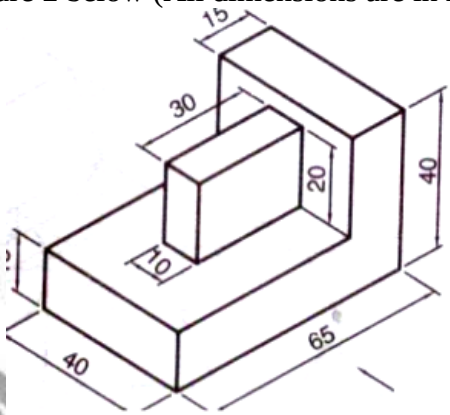

Figure 2

8. A square plane with a 60 mm side lies on the GP with the edge nearer to the observer lying in the PP. The station point is 50 mm in front of PP, 60 mm above GP, and lies in a CP which is 50 mm towards right of the centre of the object. Draw its perspective view. [15]

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Code.No: 09A10291 | R09 | SET-3

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
I B.TECH – REGULAR EXAMINATIONS JUNE - 2010
ENGINEERING DRAWING
(COMMON TO EEE, EIE, ECC)

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

Answer any FIVE questions
All questions carry equal marks

- - -

1(a) Construct a Vernier scale of RF=1/500 to show decameters, metres and decimeters, and to measure up to 4 decametres. Show the lengths of 0.0393 km and 0.0001 km on it.

(b) A stone is thrown from a 7 m high building, and at its highest flight the stone just crosses a 14 m high palm tree. Trace the path of the stone till it touches the ground. The distance between the building and the palm tree is 4 m. [15]

2. The front view of a line PQ measures 70 mm and makes an angle of 30^0 with the reference line. P is in the H.P. and the V.T of the line is 15 mm below the H.P. The line is inclined at 45^0 to the V.P. Draw its projections and find its true length, inclination with the H.P, and locate the H.T. [15]

3. Draw the projections of a cone, with a 50 mm base diameter and a 70 mm long axis that is resting on a point of its base circle on the ground such that its axis is inclined at 30^0 to the H.P. and the top view of the axis is inclined at 45^0 to the V.P. [15]

4. A square prism having a base with a 40 mm side and a 60 mm long axis, stands on its base on the H.P. with its vertical faces equally inclined to V.P. A circular hole with 50 mm diameter is drilled centrally through the prism such that the axis of the hole is perpendicular to the V.P. Draw the development of the lateral surface of the prism. [15]

5. A cylinder with a 50 mm diameter base and a 70 mm height is resting on its base on the HP. It is intersected by a triangular prism of 35 mm sides whose axis is parallel to both the reference planes and is offset by 5 mm from the cylinder's axis. Draw the three views and show the curves of intersection. [15]

6. The frustum of a sphere with a 60 mm diameter and frustum circle with a 40 mm diameter is used as a paper weight. Draw its isometric projection. [15]

7. Draw the front view, top view and side view of the object whose isometric view is shown in the Figure 3 below (All dimensions are in mm). [15]

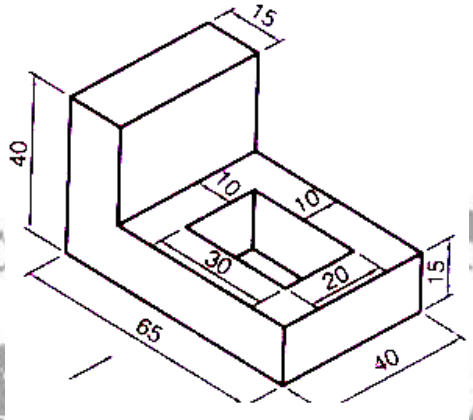

Figure 3

8. A rectangular plane with 60 mm and 40 mm sides is lying in the GP with the longer side parallel to and 15 mm behind the PP. The station point is 50 mm in front of the PP, 60 mm above GP, and lies in the CP passing through the centre of the object. Draw its perspective view. [15]

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Code.No: 09A10291 | R09 | SET-4

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
I B.TECH – REGULAR EXAMINATIONS JUNE - 2010
ENGINEERING DRAWING
(COMMON TO EEE, EIE, ECC)

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

Answer any FIVE questions
All questions carry equal marks

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1(a) Draw a Vernier scale of RF = 1/24 to read yards, feet and inches, and to measure up to 4 yards. Show on it lengths representing
(i) 2 yards 2 feet 10 inches
(ii) 1 foot 3 inches.

(b) Draw a parabola having a base of 80 mm and an axis equal to 80 mm by the tangent method. [15]

2. A 100 mm long line PQ is inclined at 45^0 to the H.P and 30^0 to the V.P. The point P is 10 mm below the H.P. and 25 mm in front of the V.P. Draw its projections and determine its traces, if the point Q lies in the second Quadrant. [15]

3. An isosceles triangle ABC with a 60 mm base AB and altitude 80 mm , has its base in the V.P. and inclined at 30^0 to the H.P. The corner A is 15 mm above the H.P. and the corner C is in the H.P. Draw the projections of the plane. [15]

4. A pentagonal pyramid with a 55 mm base and a 90 mm slant height, has its base on the HP with a side of base perpendicular to the VP. It is cut by a section plane whose VT is inclined at 60° to XY and intersecting the axis at 40 mm from its base. Draw the Front View, Sectional Top View, Sectional Side View, and the true shape of the section. [15]

5. A cylinder with a 60 mm diameter and a 100 mm length has its axis perpendicular to the VP. Another cylinder with a 44 mm diameter and a 120 mm length penetrates the first cylinder. The axis of the penetrating cylinder is parallel to the HP, inclined at 15^0 to the VP, and 8 mm away from the axis of the first cylinder. Draw the two views of the cylinders showing the curves of intersection. [15]

6. A hexagonal prism with a 30 mm base and 45 mm axis has an axial hole with a 30 mm diameter. Draw its isometric projection. [15]

7. Draw the front view, top view and side view of the object whose isometric view is shown in the Figure 4 below (All dimensions are in mm). [15]

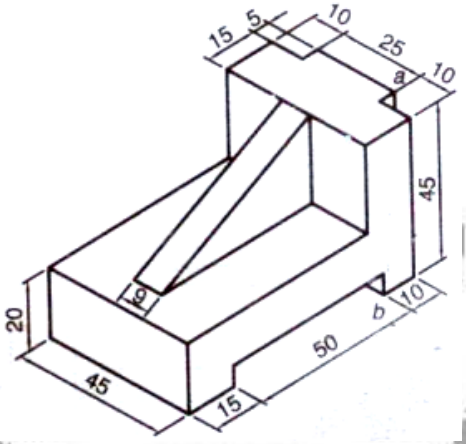

Figure 4

8. A pentagonal plane with a 30 mm side lies on the GP with an edge parallel to and 20 mm behind the PP. The station point is 50 mm in front of the PP, 65 mm above GP, and lies in a CP which is at a distance of 40 mm towards right of the centre of the object. Draw its perspective view. [15]

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